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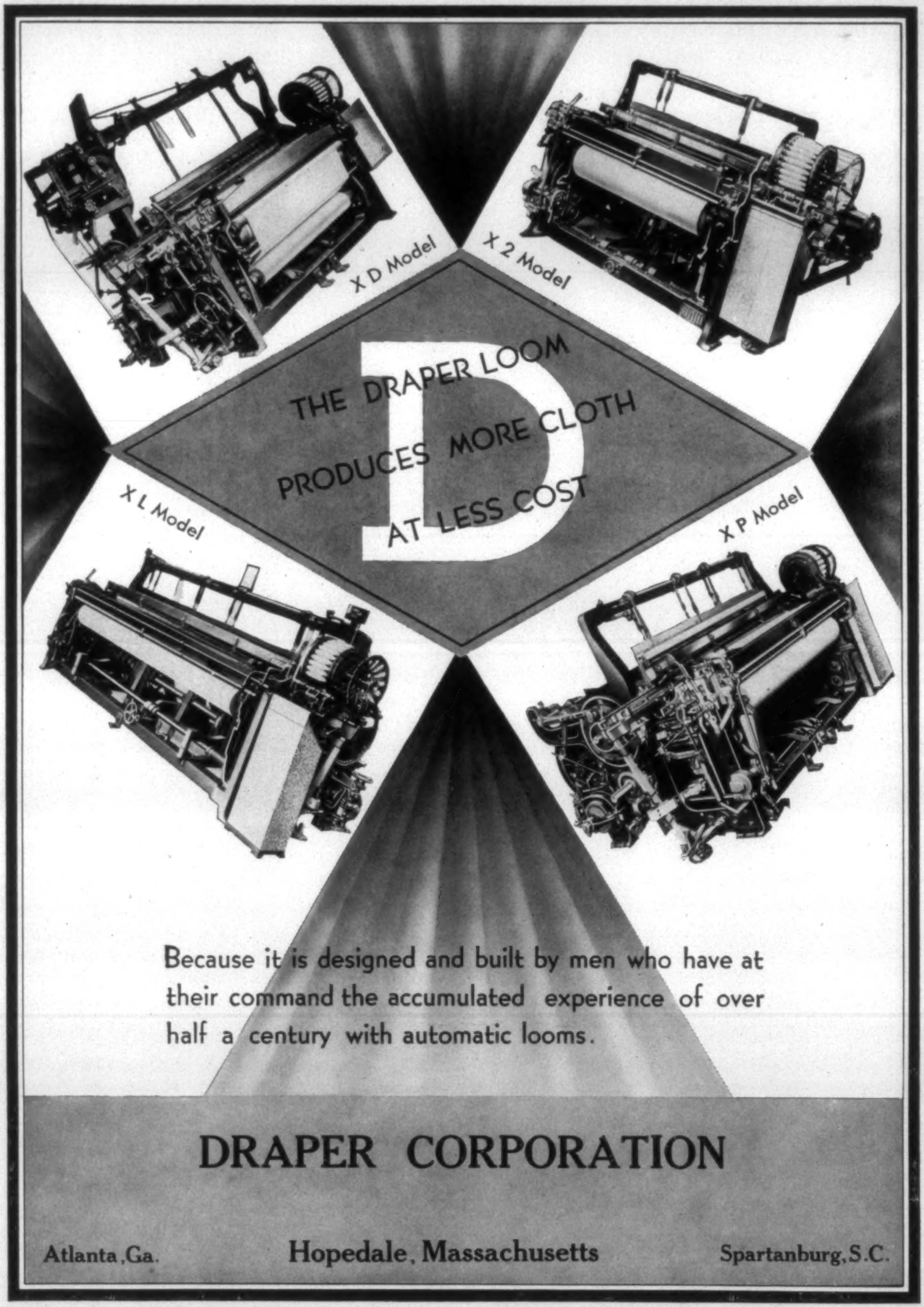
NON-FLUID OIL is not the name of a general class of lubricants. [illegible] is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.



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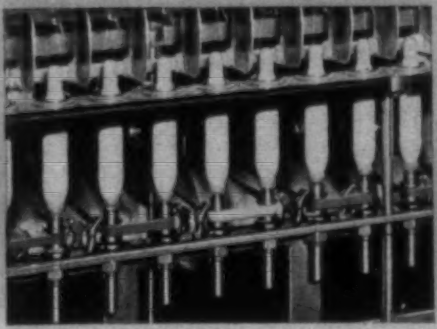
LESS FRICTION

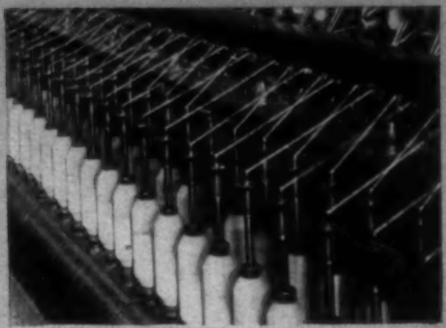
SAVE ON POWER COSTS TOO!

SINCLAIR

LONG BOLSTER LIFE



LESS THREAD BREAKAGE



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To save wear *and* power, use Sinclair LILY WHITE Oils.

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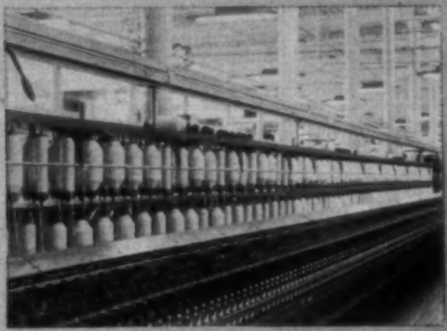
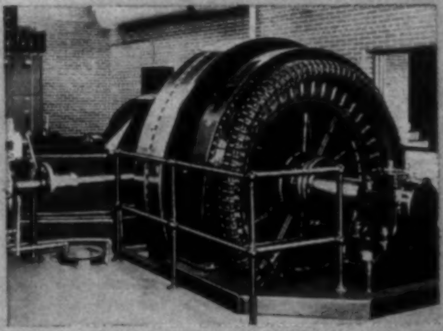


LOW POWER COSTS



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For lubrication counsel, see your nearest Supplier of Sinclair Products
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We hold this to be the most important

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for efficiency in operation, quality in production, and success in management.

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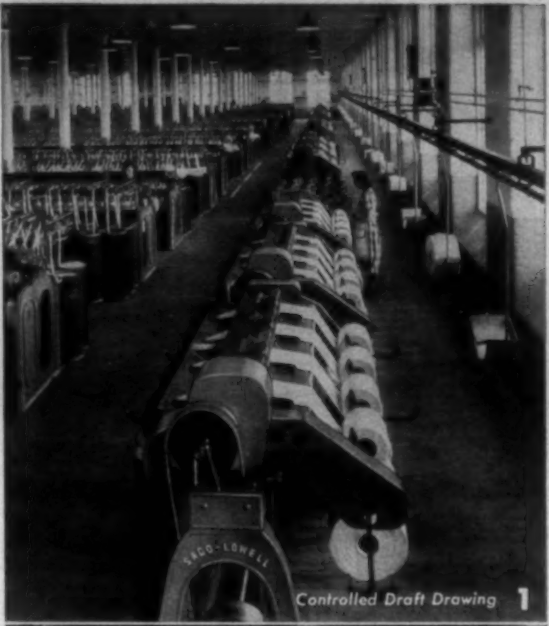
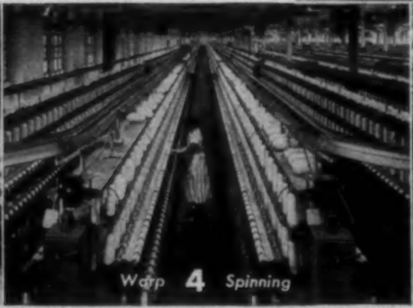


Controlled Draft Drawing **1**

FS-2 Roving **2**

5 *Spinning with Shaw Drafting Unit Assembly*



Warp **4** *Spinning*

New Era Spindles on Warp Spinning **3**

PHOTOS: Nos. 1 and 3, Pelzer Mills; Nos. 2 and 5, Dominion Textile Company, Limited; No. 4, Pacolet Manufacturing Company.

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There's an exclusive difference in Armstrong's Accotex® Cots. These synthetic covers are compounded with certain electrolytes which counteract the normal attraction between fiber and cot. Accotex Cots actually tend to repel broken ends, as the diagrams below show.

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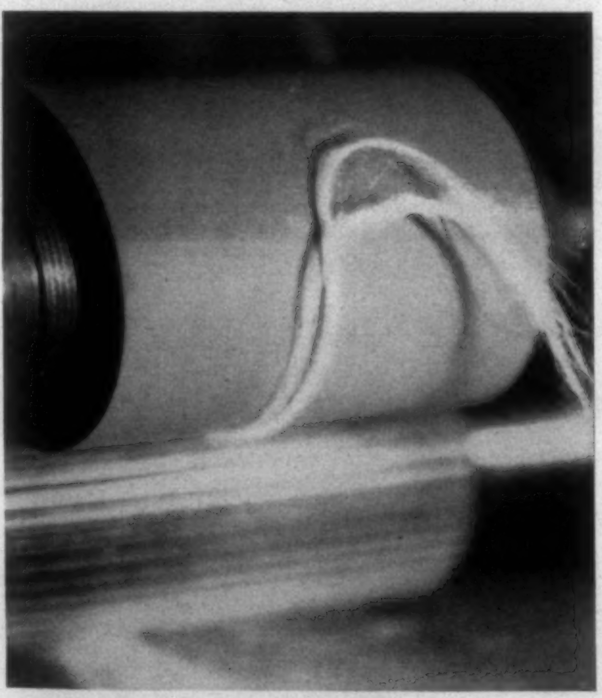
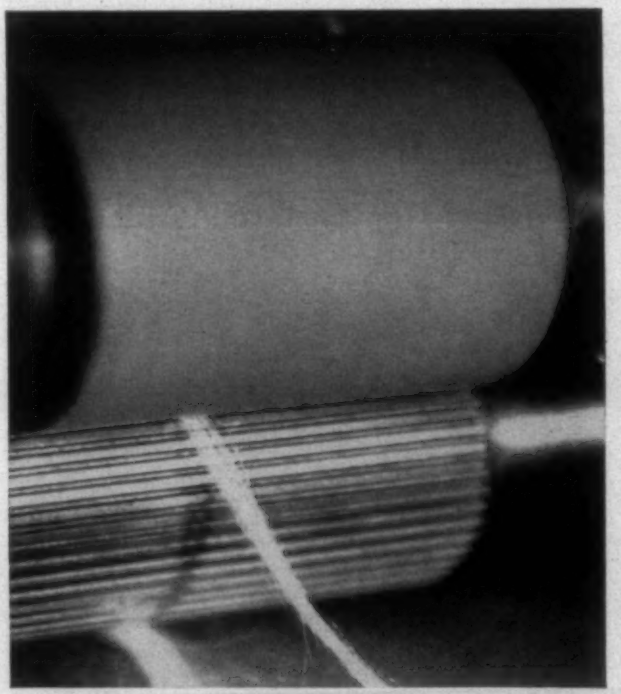
Since spinning conditions differ from mill to mill, Armstrong offers a complete line of specialized Accotex Cots. Whether you are spinning cotton, wool, or synthetics, you can get a lap-resistant cover especially formulated for your type of job from Armstrong. They are made in straight rubber compounds as well as cork-and-rubber combinations.

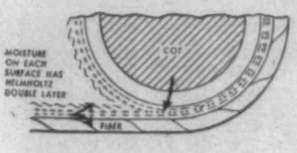
For a trial installation, call your Armstrong representative or write Armstrong Cork Company, Textile Products Dept., 8202 Arch St., Lancaster, Penna. Available for export.



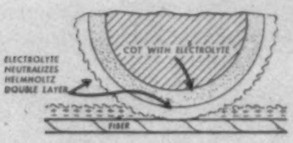
THIS COT LAPS



THIS COT DOESN'T LAP



THIS COT LAPS. Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, the two moisture layers have an adhesive effect.



THIS COT DOESN'T LAP. Electrolyte incorporated in patented Accotex rubber composition neutralizes electric charge in moisture layer on cot. This eliminates adhesive effect.

ARMSTRONG'S ACCOTEX COTS

BETTER YARNS AT LOWER COSTS

. . . that's what interests every yarn spinning mill

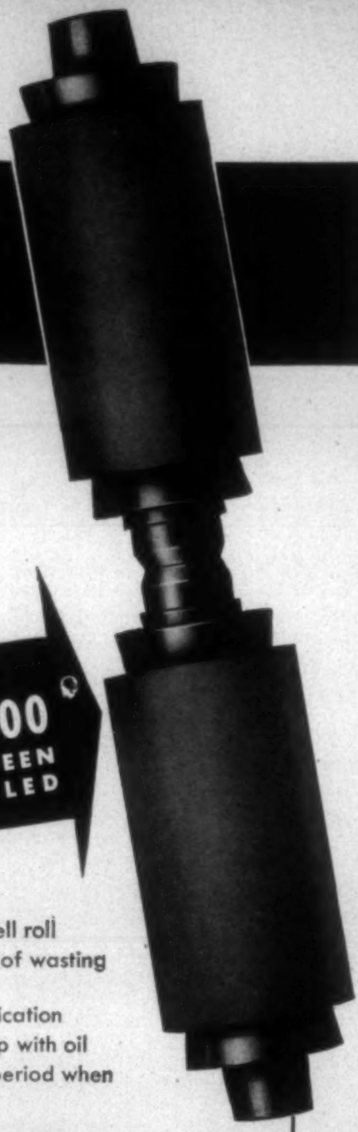
SACO-LOWELL-TORRINGTON

S-L-T NEEDLE BEARING TOP ROLL

FOR ROVING AND SPINNING

is daily helping to produce better yarn in many mills that are operating on a quality-conscious and cost-conscious basis.

In this highly competitive era, it is becoming increasingly necessary for mills to change their out-moded conventional top rolls to the S-L-T Needle-Bearing type. Here are just a few of the reasons:



OVER 450,000 HAVE BEEN INSTALLED

ELIMINATE WEEKLY OILING

Pre-lubricated S-L-T Top Rolls

- **a)** save the oiling time that is required for the old shell roll
- **b)** let your frames roll, and *produce yarn* — instead of wasting ½–hour weekly, per frame, for oiling
- **c)** save 90% of the oil you now buy for top roll lubrication
- **d)** keep frame, cots and yarn from getting messed up with oil
- **e)** enable you to re-lubricate at the annual scouring period when the frame is down anyway

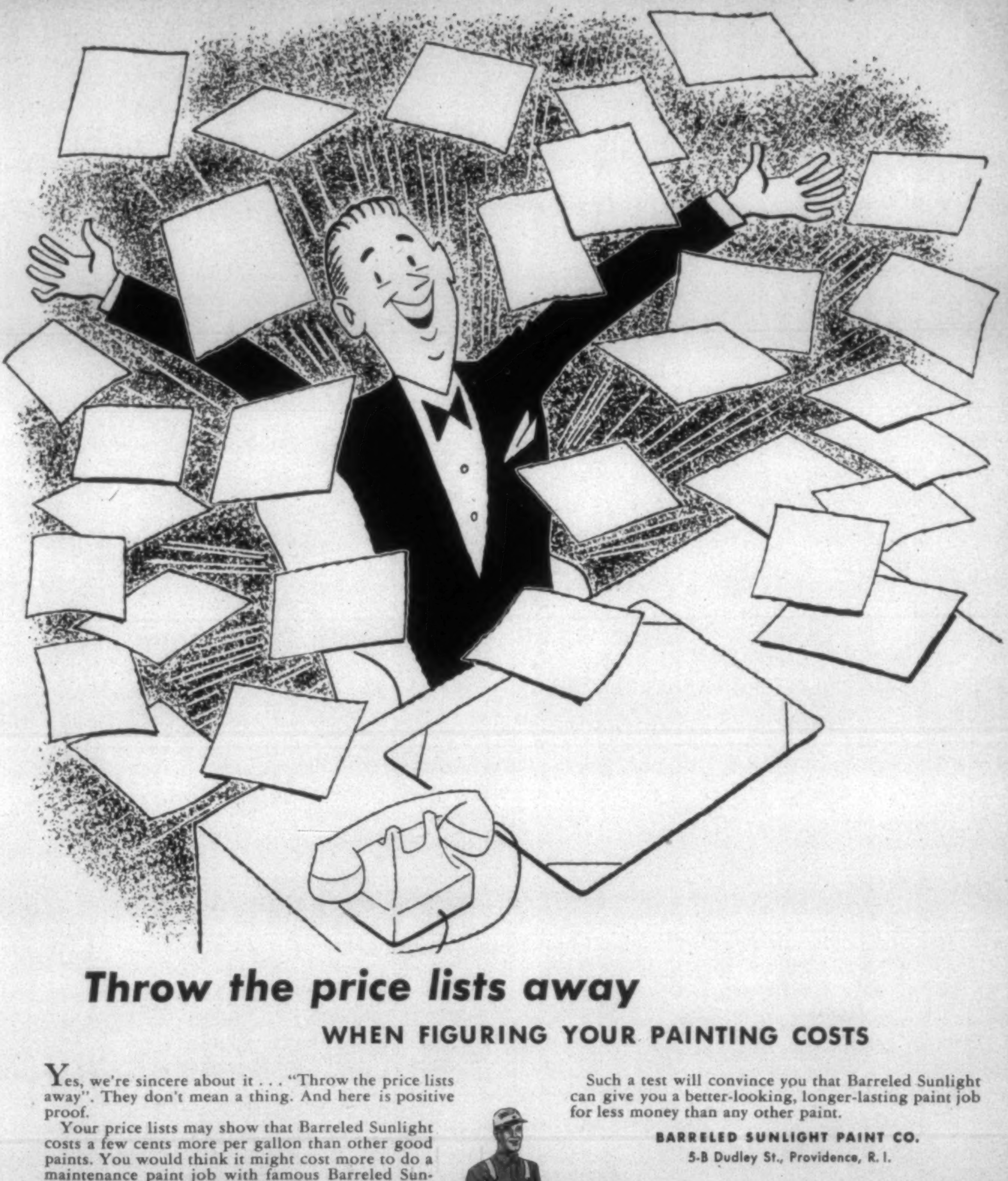
ELIMINATE ROUTINE "ROLL-PICKING"

The smooth, metal surfaces are all practically lint-shedding, so that stray fibers and short linty waste have a diminished tendency to cling to the exposed surfaces... especially since there is no film of oil or grease acting as an adhesive.

S-L-T TOP ROLLS are manufactured by THE TORRINGTON COMPANY, Torrington, Conn., and are available exclusively through

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.
Shops at BIDDEFORD, MAINE *and* SANFORD, N. C.
SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA



Throw the price lists away

WHEN FIGURING YOUR PAINTING COSTS

Yes, we're sincere about it . . . "Throw the price lists away". They don't mean a thing. And here is positive proof.

Your price lists may show that Barreled Sunlight costs a few cents more per gallon than other good paints. You would think it might cost more to do a maintenance paint job with famous Barreled Sunlight, but that is wrong. It won't.

Why? Because when properly thinned a five-gallon can of Barreled Sunlight gives you six gallons ready for the brush. So you save from the very start by buying less paint.

But that is only 20% of the story. The big factor . . . the 80% of the cost of any paint job . . . is *in your labor*. This is where Barreled Sunlight, with its faster flow, better coverage and greater yardage per man hour really saves you money.

This simple test will prove it! Compare a gallon of Barreled Sunlight with a gallon of any other paint . . . *paint it on a wall.* Compare them for appearance, square feet of surface covered *and time involved for application.*

Such a test will convince you that Barreled Sunlight can give you a better-looking, longer-lasting paint job for less money than any other paint.

BARRELED SUNLIGHT PAINT CO.
5-B Dudley St., Providence, R. I.

Barreled Sunlight
Paints

In whitest white or clean, clear, pleasing colors, there's a Barreled Sunlight Paint for every job

IT ALWAYS COSTS MORE NOT TO PAINT!

PRODUCTION PROBLEMS

got you up a tree?

- The function of our Technical Service Department is to help solve various production problems in the field. These men are constantly working with new products and techniques—perhaps this experience would be helpful in smoothing out production sore spots in your operation.

Our basic, continuing research in starch chemistry is unsurpassed . . . under the direction of the foremost research men in this field.

Make the most of these facilities . . . no obligation, of course.

For uniform quality products . . . for a reliable source of supply . . . depend on Corn Products Refining Company.

write to

CORN PRODUCTS REFINING CO.

17 Battery Place, New York 4, N. Y.

Globe and Eagle are registered trade-marks of Corn Products Refining Company, New York, N. Y.

Saco-Lowell 1935 Model Long Draft Spinning Frames mounted on Unisorb at Mount Vernon-Woodberry's Tallassee Mills, Tallassee, Ala.

NO FLOOR DAMAGE

...Because There's No DRILLING!

Eliminate Bolts and Lag Screws . . . Mount Machinery on UNISORB ®

Easy to install, UNISORB-Mounting requires none of the maintenance care and expense you've been used to.

A special cement (we supply it) binds the UNISORB pads to machine feet and floor with a holding strength of 1500 lbs. per sq. foot *minimum.*

And it absorbs from 60% to 85% of transmitted noise and vibration . . . saves floors, building, machinery . . . often permits higher machine speed.

You'll want all the facts handy the next time you move a machine, or add a new machine — *or a new plant* — to your operation.

Write . . . *right now!*

LOOK FOR THE RED CENTER AND UNISORB BRAND MARK ®

THE FELTERS COMPANY

210-T SOUTH STREET, BOSTON 11, MASSACHUSETTS

Offices: New York, Philadelphia, Chicago, Detroit, Cleveland, St. Louis
Sales Representative: San Francisco
Southern Representative: Industrial Supply Co., Clinton, S. C.
Southwest Representative: Textile Supply Co., Dallas, Texas
Mills: Johnson City, New York; Millbury, Mass.; Jackson, Mich., New York City

Foreign Representatives: ARGENTINA — PARAGUAY: Roberto Zander, 345-353 Juan Jaures, Buenos Aires; BRAZIL: Cia Industria E. Comercio, Glossop, Rua Visconde de Inhauma, 62, Caixa Postal, 265, Rio de Janeiro; Rua Florencio de Abreu 438/442, Caixa Postal, 1546, Sao Paulo; CHILE: W. L. Robinson, Casilla No. 4075, Santiago; COLOMBIA: C. E. Halaby & Co., Ltd., Airmail Box 650, Medellin; ECUADOR: Richard O. Custer; S. A., Guayaquil St. 937, P. O. Box 2753, Quito; URUGUAY: Roberto Zander, Montevideo Ltda., Calle Uruguay, 1711, Montevideo; VENEZUELA: Herbert Zander & Co., P. O. Box 1291, Caracas; PERU: Custer & Thommen Soc. An., Casilla 733, Lima; CENTRAL AMERICA: Agencias Unidas S. A., Apartado 391, Guatemala City, Guatemala, C. A.; MEXICO: Slobotzky, S. A., Avenida Uruguay 55, Apartado 1192, Mexico, D. F.; EUROPE: Ernst Gersbach, Zurich, Switzerland; EASTERN MEDITERRANEAN AREA AND INDIA: The Arlind Corp., 509 Madison Avenue, New York 22, N. Y.; IRELAND: Engineering Services Ltd., Albert Street, Cork.

THE FELTERS COMPANY
210-T South Street
Boston 11, Mass.

Gentlemen:

Please send my free copy of "Why It Pays to Anchor Your Textile Machinery with UNISORB."

NAME .... **TITLE** ....

ADDRESS ....

COMPANY NAME ....

Improved Quality? **Yes!**

Increased Production? **Yes!**

Reduced Costs? **Yes!**

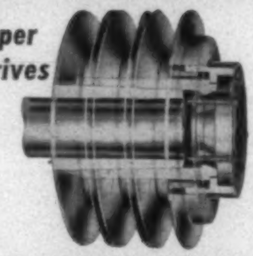
Textile Mills Get All 3 Benefits

when they use

AMERICAN DRIVES

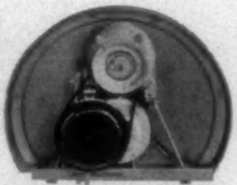
Whatever your drive problems, you will benefit by consulting our drive engineers. They offer you the advantages of American's 50-year drive experience in textile drive applications.

New! American Double-Taper Adjustable-Speed Drives



The new American Double-Taper Adjustable-Speed Drives permit textile men to improve quality, increase production and reduce costs because they make it possible to get just the right speed at both low first-cost and low maintenance cost. Vibration, fretting corrosion and freezing are eliminated. The secret of the operating advantages of these drives is in the double-taper hub construction of American Adjustable-Diameter Sheaves. These double-taper hubs are made up of tapered bushings which make the sheaves easy to mount and dismount and tapered sleeves which lock all flanges into "solid", trouble-free sheaves. Send the coupon below for complete information on these new unique drives.

New! American Individual Cotton Card Drives



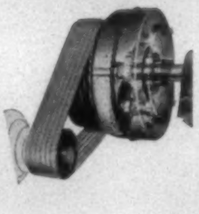
These new, modern card drives give textile mills all the advantages of improved quality, increased production and reduced cost demanded by today's market. They make possible more efficient plant layout, better lighting, improved air conditioning and better all-around plant "housekeeping". Improved quality and increased production are possible because these drives eliminate line shafting and permit a 20% variation in speed for each individual card. First cost is low because the drives are simple, consisting of a single-reduction helical-gear unit, an adjustable-speed V-belt drive, and a unique centrifugal clutch, all driven by a standard motor with standard controls. The drives are easy and inexpensive to install and nest compactly in the card arch with no floor obstructions and ample aisle clearance. Mail the coupon below for the facts on these modern Individual Card Drives.

OTHER AMERICAN DRIVES—Designed for Efficient Textile Mill Applications

American *Econ-o-matic* Spinning Frame Drives

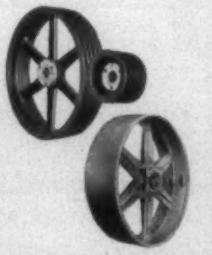
These drives eliminate belt slip because the motor mounting is designed so that the reaction torque of the motor automatically adjusts belt tension to the load. High starting tension for heavy starting load—normal running tension for normal running load.

American *Reduction* Drives



Shaft-mounted American Reduction Drives give you any speed below 154 r.p.m. They are easy to install, are quiet and trouble-free. They are available with the unique American Torque-arm Overload Release which provides instantaneous mechanical protection for both machine and drive in case of jam or shock loads.

American *Wedgbelt* and Flat Belt Drives



American Wedgbelt Drives are clean, quiet and efficient. Sheaves have split tapered bushings for easy mounting and dismounting.

American Steel Split Pulleys are strong, light in weight and true-running. American Hi-Torque Motor Pulleys, made of compressed and treated plywood, provide extra friction and wear qualities.

AMERICAN DRIVES

The American Pulley Company
4234 Wissahickon Avenue, Philadelphia 29, Pa.

Please rush us complete engineering data on the following American Drives:

- ☐ Double-Taper Adjustable-Speed Drives
- ☐ Individual Cotton Card Drives
- ☐ Econ-o-matic Spinning Frame Drives
- ☐ Reduction Drives
- ☐ Wedgbelt and Flat Belt Drives

NAME..

COMPANY..

ADDRESS..

CITY............................ ZONE........ STATE....................

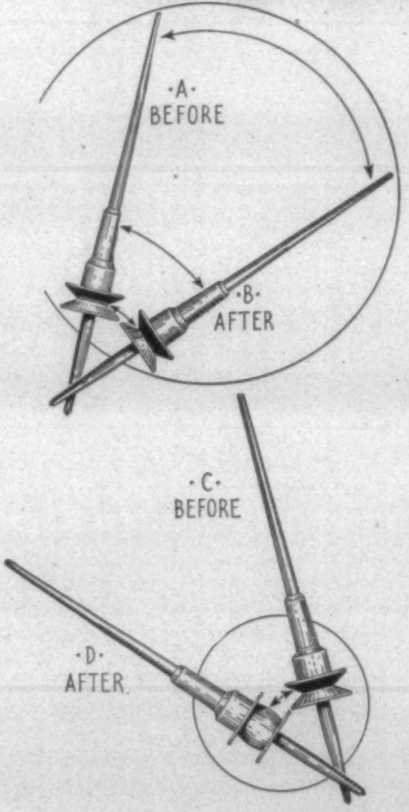
WE MANUFACTURE, REPAIR, AND RECONDITION TEXTILE MACHINERY PARTS

LET GOSSETT

KNOW-HOW AND EXPERIENCE BRING EFFICIENCY TO YOUR MILL

Keeping textile mills running at top efficiency has been our business for many years. The GOSSETT experience and knowledge in precision manufacturing . . . the GOSSETT skilled technicians who repair and recondition textile machinery parts . . . are important and valuable assets to textile mills everywhere. Give us a call. Estimates gladly furnished.

LOOK *what we do to spindles!*



A. This spindle is badly worn. Note the wornout top, acorn and drive . . . Now look at spindle (B) . . . the same spindle reconditioned by GOSSETT master technicians.

B. The worn top has been cut off and a new piece of spindle steel butt-welded onto spindle blade and the top ground to specified size. We also build up the worn top with hard chrome plate and grind the top to size specified. After retopping blade, if necessary we put on a new whorl (made by GOSSETT).

C. This is a conventional band driven spindle. Mill specifications called for a tape driven spindle so, GOSSETT technicians converted at a fraction of the cost of complete spindle replacement.

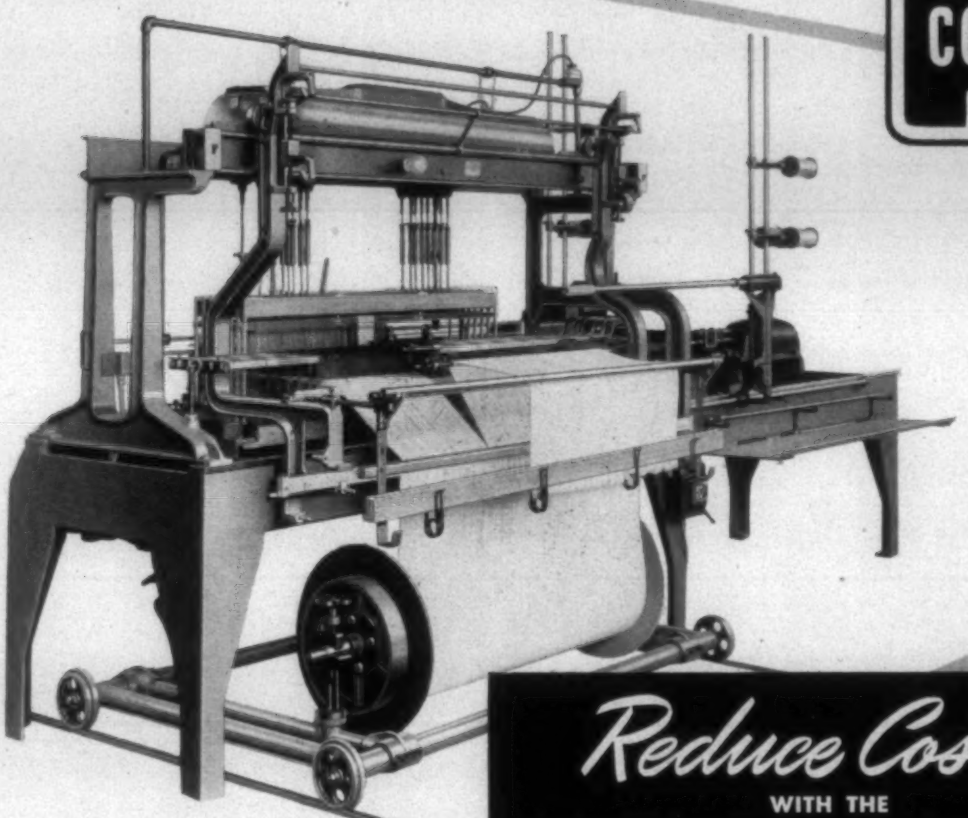
D. We removed the band driven whorl and put on a new GOSSETT tape driven whorl. Then we arranged the band driven spindle base so that it can be used with tape driven spindle. Takes know-how and equipment plus skilled technicians.

NOTE: **All spindles repaired or reconditioned by GOSSETT are precision straightened before they leave our shop. All work is guaranteed.**

B. W. GOSSETT, President
E. C. MASON, Sales Manager
D. W. SMITH, N. C.-Va. Representative

GOSSETT MACHINE WORKS, INC.
GASTONIA, NORTH CAROLINA

BARBER COLMAN



Reduce Costs!

WITH THE

BARBER-COLMAN DRAWING-IN MACHINE

- ★ **VERSATILE...**
- ★ **ACCURATE...**
- ★ **EFFICIENT...**

DRAWS IN HEDDLES, DROP WIRES, AND REED IN ONE OPERATION

Many mills today are running such a variety of weaves, patterns, and stripes that the drawing-in operation becomes a major cost item. *Substantial savings* can be made by the use of a Barber-Colman Drawing-In Machine. This machine will handle any plain, fancy, or dobby weave. It draws-in all the heddles, drop wires, and reed in *one* operation — automatically selecting the proper heddle, drop wire, and reed dent for each thread. Any form of skip draw can be handled as easily as straight sequence, and the draw can be made from either a flat sheet or leased warp. The machine is available in a variety of capacities, drawing as many harness and banks of drop wires as required. Variations in size will take care of all standard loom widths. Modern mills of any size can take advantage of the versatility, accuracy, and efficiency of this outstanding machine to effect important savings in what has been a slow and costly hand operation. Consult your Barber-Colman representative for a discussion of possibilities in your own mill.

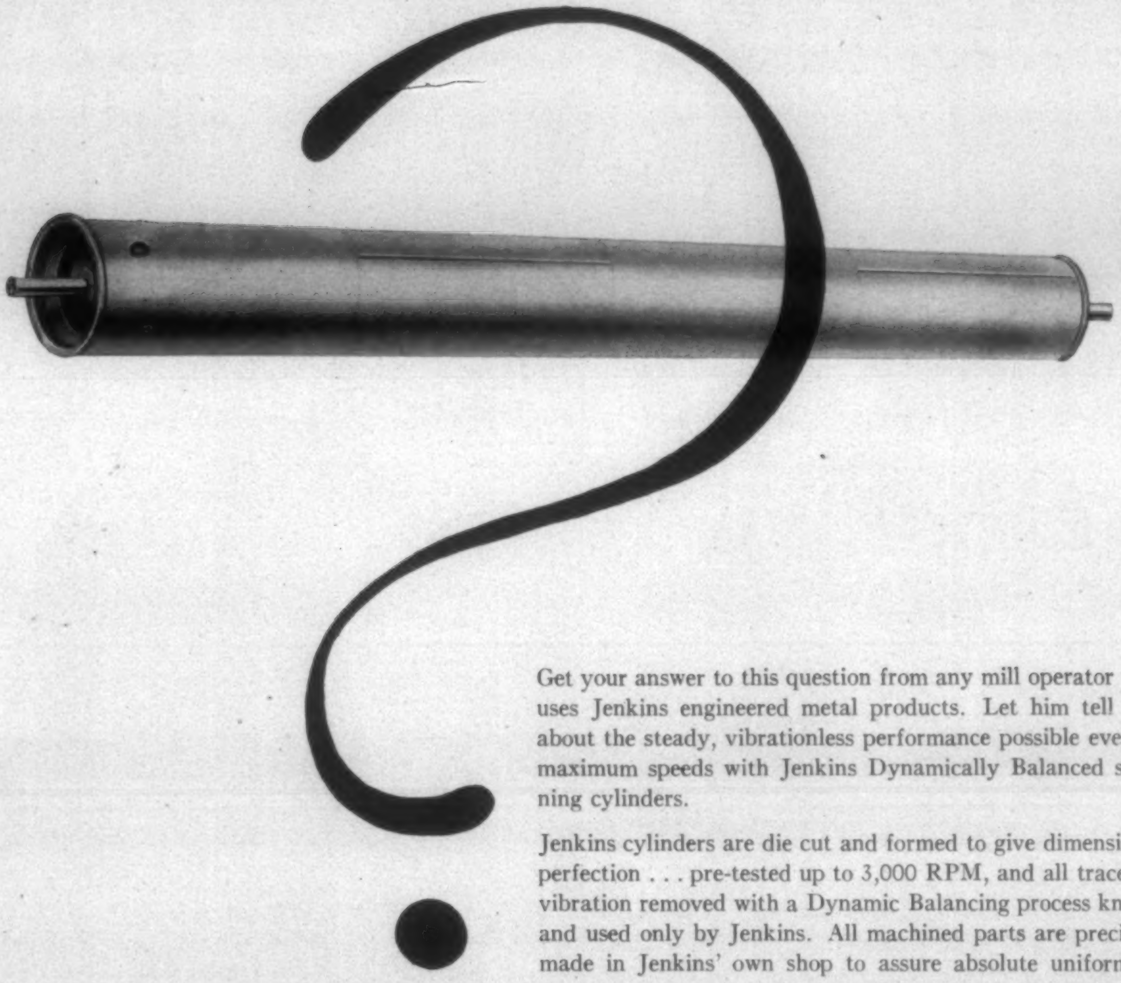
AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

HOW SMOOTH CAN A CYLINDER RUN



Get your answer to this question from any mill operator who uses Jenkins engineered metal products. Let him tell you about the steady, vibrationless performance possible even at maximum speeds with Jenkins Dynamically Balanced spinning cylinders.

Jenkins cylinders are die cut and formed to give dimensional perfection . . . pre-tested up to 3,000 RPM, and all traces of vibration removed with a Dynamic Balancing process known and used only by Jenkins. All machined parts are precision made in Jenkins' own shop to assure absolute uniformity.

The result: yarn flows freely and smoothly at all speeds. Excessive wear on spindles, bolsters, gears, bearings, and journals is eliminated. You increase production, cut costs, and improve quality.

Unless you're sure you are getting the smoothest possible performance on every spinning frame, write us for full information.

JENKINS Dynamically Balanced
SPINNING CYLINDERS

JENKINS
ENGINEERED PRODUCTS

JENKINS METAL SHOPS • GASTONIA • NORTH CAROLINA

Gee, am I popular? . . . everybody's after my money!

Yes, everybody (and his brother) is competing for her clothes-allowance

. . . and Competition begins in the Weaveroom!

She's a tough customer, and getting tougher all the time. She knows how to get the last whisper of quality to the last fraction of a cent. And she shops till she gets it!

So it's no happenstance that the major part of her wardrobe is cut from cloth woven in mills equipped with modern, high-speed, automatic C&K Call Box Looms.

For C&K Call Box Looms are quickly convertible and widely adaptable to meet her fast-changing whims. They weave high-quality fabrics at low cost . . . and in quantities that pay profits in any price-situation.

Yes, a modern C&K Weaveroom . . . kept at top operating efficiency with Certified C&K Loom Parts . . . *is a successfully competitive weaveroom.*

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

CORROSION NOW POSES A DOUBLE THREAT

Worn out and corroded equipment may not be replaceable

Don't take chances on vital equipment. Scarce metals and materials are becoming scarcer. Farsighted business men are rebuilding, repairing and *protecting* to insure continuity of their operations.

Do these two things today:

1. Check up in your plant—manufacturing equipment, piping, valves, tanks, motors, and all similar items.
2. Arrange to protect them with Amercoat—the corrosion-resistant coatings; each designed to meet specialized conditions.

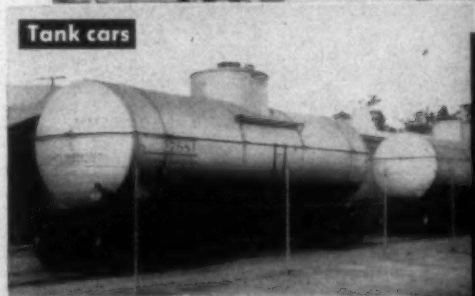
Note: Most conventional coatings fail under severe service conditions. They are neither designed nor suitable for such applications.

AMERCOAT CORPORATION

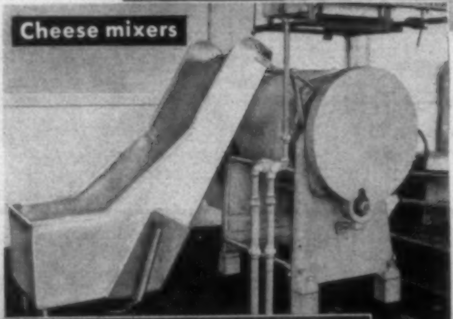
A Division of American Pipe and Construction Co.
4809 Firestone Blvd., South Gate, California

FOLLOW THE LINE OF *most* RESISTANCE

Dam gates


Tank cars

Paper mills


Cheese mixers

Oil tanks

Why Mills Prefer

H&B TWISTERS

H & B Twisters are built ruggedly — and exactly — to exact specifications for producing high quality finished yarn with an even twist.

They deliver a firm, well-shaped package, carrying the maximum yardage permissible within the natural limlts imposed by traverse and ring diameter. Whether the yarn is twisted for duck, top quality broadcloths, gabardines or sewing thread, you can count on the final quality of the twisted yarn, as well as the safety, ease and economy of operation of the machine. Among the many features that assure trouble-free run-off in subsequent yarn operations are:

1. *The ball bearing thrust washer in the builder drive that prevents dwelling at the top and bottom of the stroke and particularly aids high-speed winding.*
2. *Wet twisters are equipped with an automatic water feed control that maintains the same level in troughs, assuring even water penetration.*
3. *Replaceable bottom roll bearings to reduce maintenance cost.*

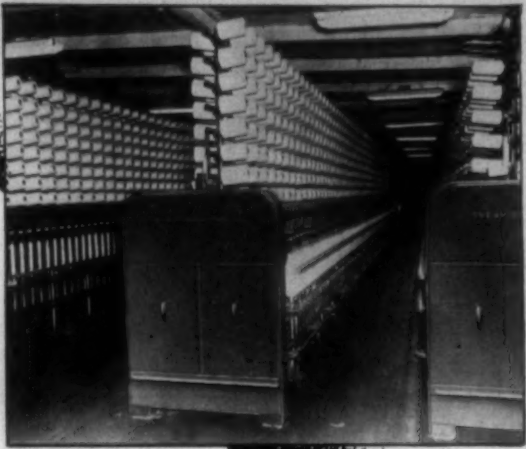
Supply packages on H & B Twisters can be beams as well as cones or tubes. Beam stands have ball bearings and a brake assembly which assures uniform and even tension let-off. Superstructure can have one or more beams. The shift to single beam operation is accomplished by moving one set of beam stands to the center position.

These and other additional efficiency features are why, when running yarn for tire cord, where perfect twist is required — most mills prefer H & B Beam Twisters.

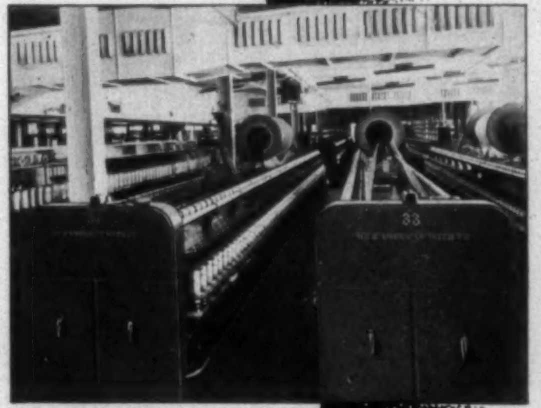
HEAD END FEATURES:

1. *All cut gears throughout.*
2. *Silent chain drive from cylinder to jack shaft.*
3. *Electric stop motion prevents starting of machine when doors are open.*
4. *Bijur lubrication system.*
5. *Doors swing open and away, making head end easily accessible for gear changes.*

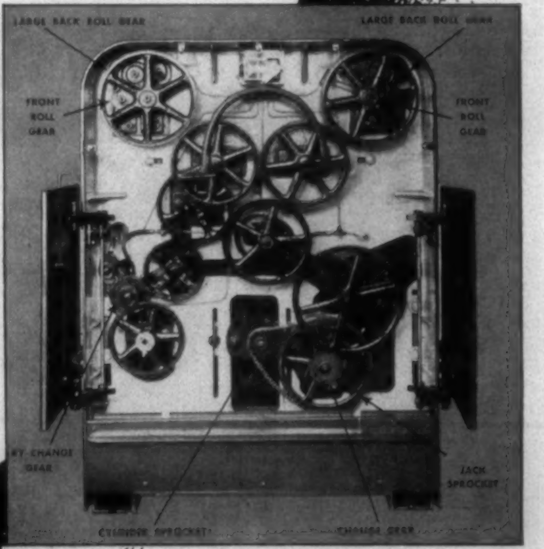
Ask to have an H & B Sales Representative call with the complete story of H & B quality twisting. Contact the main or a branch office — today.



PACKAGE TWISTER



BEAM TWISTER



HEAD END

H&B AMERICAN MACHINE CO.

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.
Branch Offices: Atlanta, Ga. — 815 Citizens and Southern National Bank Bldg.
Charlotte, N. C. — 523 West 4th Street
Greenville, S. C. — 1510-11 Woodside Bldg.

Builders of MODERN TEXTILE MACHINERY

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y.

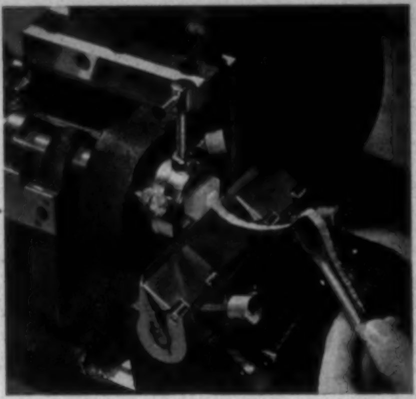
February, 1951

Staple Pilot Plant Featured in new Avisco Illustrated Booklet

Staple Development is spotlighted in a new booklet release by Avisco. It is one more in the series describing the research activities at American Viscose Corporation.

The Staple Development Plant at Nitro, West Virginia, is an important division of Avisco's product research, acting as a bridge between pure research and commercial scale production. Its dual purpose is to serve as a proving ground for the practical development of manufacturing methods as well as to develop new products.

The booklet "Staple Development Plant" tells how this department achieves these objectives . . . how it helped to develop such products as one-denier, varied-length and crimped staple. Copies are available on request to those interested in keeping abreast of advances in the textile industry.



1—During initial stages of work, spinning solution is prepared in miniature mixer.

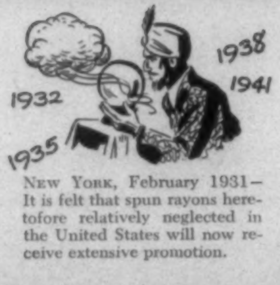
2—Microtome cuts wax-embedded rayon into microscopically thin slices 2/25,000 of an inch thick. Later wax is melted away and rayon cross section studied.

3—Moisture tests in Emerson oven indicate uniformity of products, provide check on experimental developments.

4—Staple Development scientist uses planimeter on photomicrograph to measure area of cross section of rayon staple.

RAYON 20 YEARS AGO

Tokyo, Japan, February 1931—Due to increased Japanese rayon production the Tokyo Rice Exchange will soon deal in rayon yarns.



New York, February 1931—It is felt that spun rayons heretofore relatively neglected in the United States will now receive extensive promotion.

New York, February 1931—After 15 years at 171 Madison Avenue, the Viscose Company has moved to expanded quarters at 200 Madison Avenue.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1. **FIBER RESEARCH**
2. **FABRIC DESIGN**
3. **FABRIC PRODUCTION**
4. **FABRIC FINISHING**

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

Here you see our exclusive Tufferizing Process at work . . . turning out Tuffer Card Clothing with a degree of precision and uniformity heretofore unknown in the manufacture of card clothing.

These machines and the Tufferizing Process were developed in our own engineering department . . . where the search for better ways to make better card clothing is continuous.

Our hundreds of customers who reorder time after time are proof that Tuffer Card Clothing is a superior product. Try it next time.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas *Direct Representation in Canada* A-3

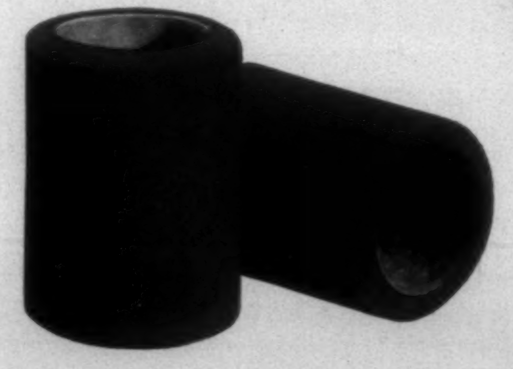
TUFFER CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE

SONOCO CORK COTS

are FOUR WAYS Better!

1. **Lowest First Cost**—The SONOCO Cot actually costs less than any other cot on the market.
2. **Better Performance**—The SONOCO Cot is built with a special lining that assures perfect fit (even to oversize and undersize rolls) and prevents elongation. This means better performance and production of higher quality, more uniform yarn.
3. **Easier to Apply, Remove**—The SONOCO Cot slips onto any size spinning or drafting roll quickly, easily . . . reduces assembly room time to a minimum. Can be easily removed for recovering.
4. **Lasts Longer**—The consistent and proper fit of the SONOCO Cot on the roll means longer life and longer runs between rebuffings.



A test run in your own mill may be secured by writing SONOCO at Hartsville, South Carolina.

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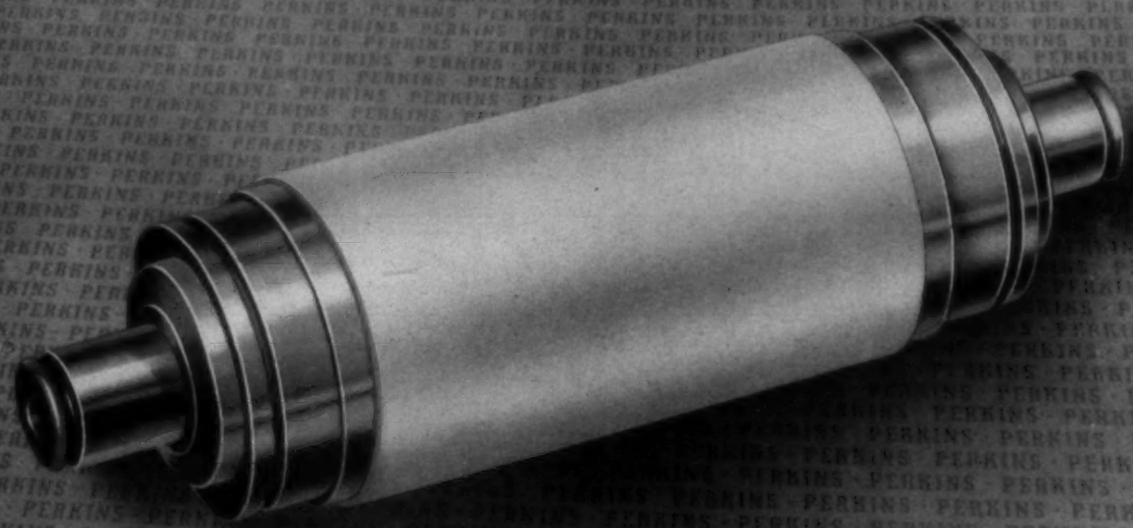

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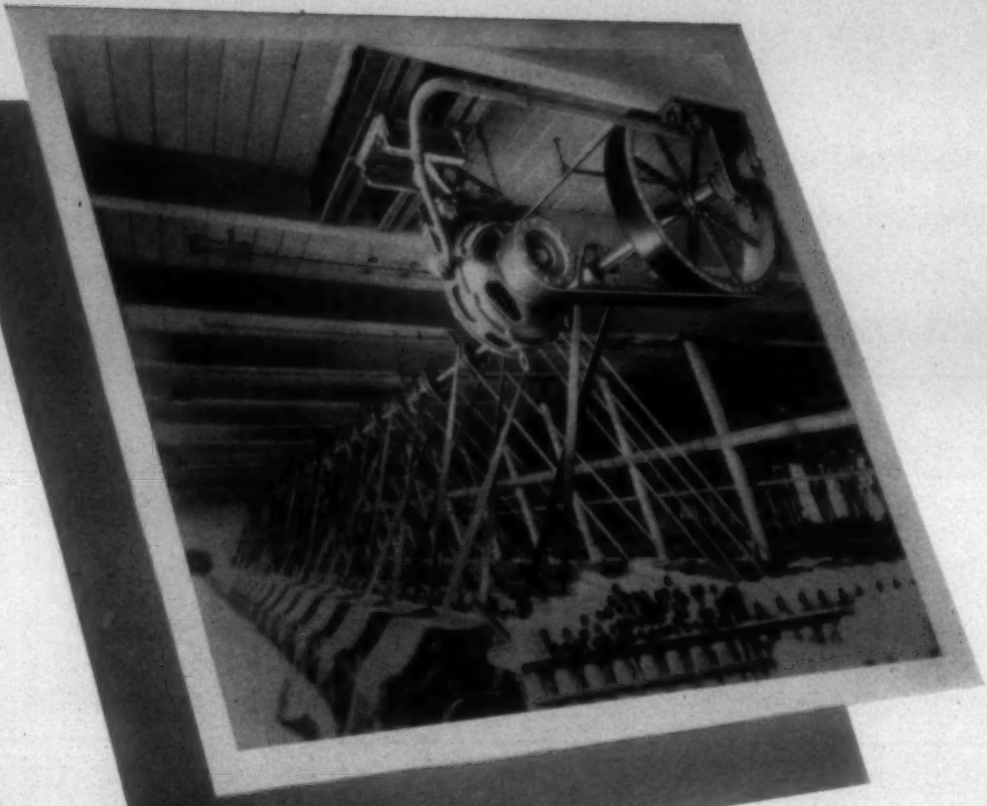

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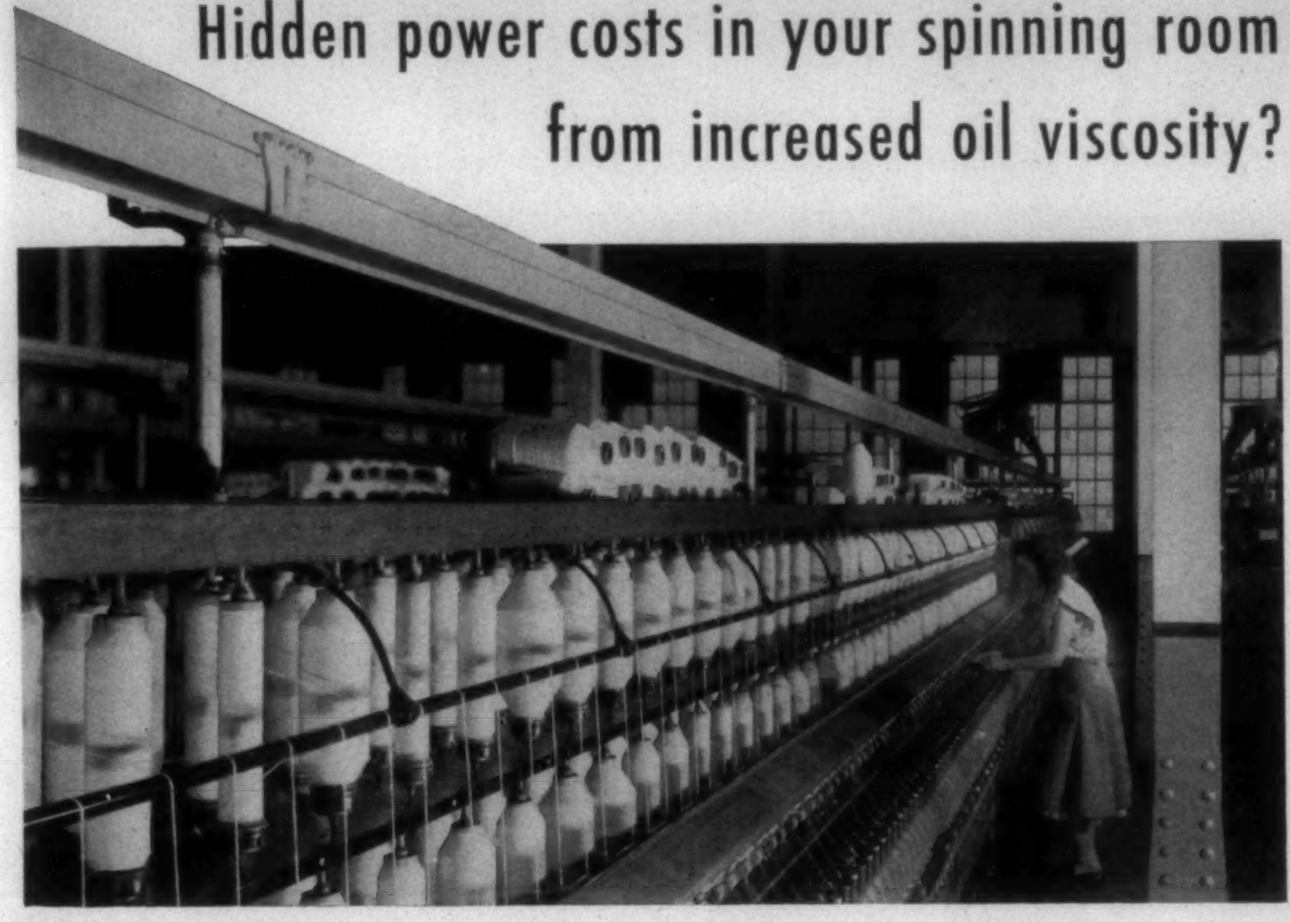
Hidden power costs in your spinning room from increased oil viscosity?



GULFSPIN maintains its original viscosity even after extended service

—keeps power consumption low

Yes, oil viscosity has an important influence on power consumption of spinning frames! The higher the viscosity the more power consumed because of increased frictional drag.

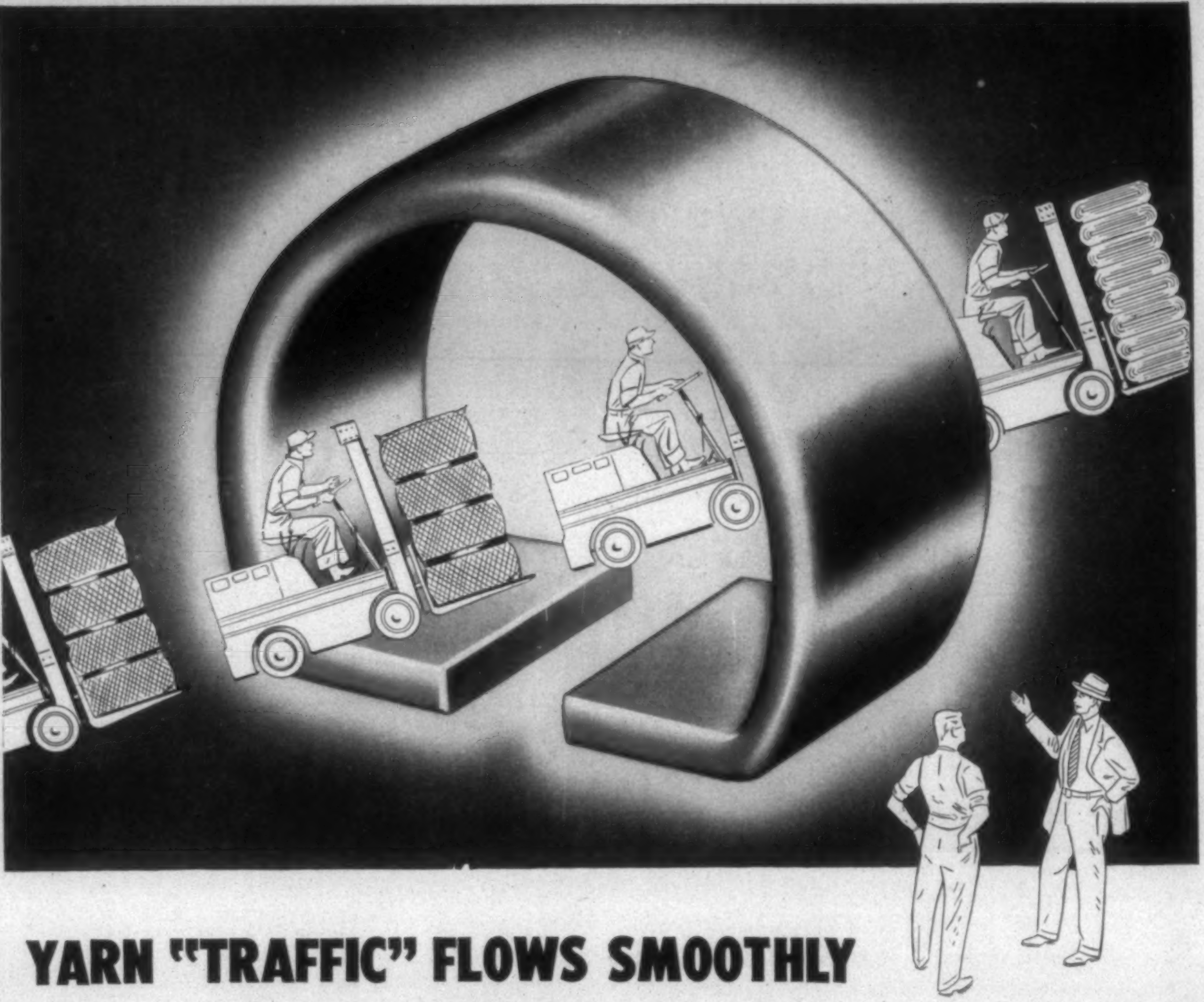
Dirt, lint, water, and oxygen act to thicken spindle oils so that after several month's service an 80 Second oil may have a viscosity of 90-100 SUV at 100°F. As a result power costs in the spinning room can be appreciably higher than normal. And this increased cost is generally hidden because few mills run periodic power checks on spinning frames.

That's one important reason why it pays to use Gulfspin. This outstanding new oil does not undergo any appreciable increase in viscosity even after extended service. Thus it is possible to make substantial savings in power costs.

Gulfspin has many other characteristics which make it effective for spindle lubrication; it is not only resistant to the formation of sludge, but also prevents sludge from depositing on spindle shafts and bolsters—thus keeps spindles clean; it reduces wear because of excellent oiliness characteristics; and helps effectively to protect spindle parts against rust.

See for yourself on your frames that this new spindle oil is better in every way. Write, wire, or phone your nearest Gulf office and ask a Gulf Lubrication Engineer to call. Gulf Oil Corporation · Gulf Refining Company, Gulf Building, Pittsburgh, Pennsylvania.

FIFTY YEARS OF SERVICE
1901 GULF 1951
PETROLEUM AND ITS PRODUCTS



YARN "TRAFFIC" FLOWS SMOOTHLY

... through *Victors*

SINCE MOST MILLS' entire output passes through travelers — whether yarn traffic is speeded or stalled depends on your selection.

Which are your travelers — bottlenecks or broad highways? Assuming equipment is in proper condition, if the traveler is **wrong**, the flow of work through the mill will be slowed up at the spinning or twisting, production will lag, quality will suffer, and profits will sag. If the traveler is **right**, you can meet output schedules, cut down waste, and upgrade quality.

With the many new developments in synthetics and blends, it is becoming more and more difficult to be sure the traveler you use is **right** for the job. To save valuable time in setting up the smooth-running spinning and twisting you want, you need up-to-the-minute information.

There's a man near you who knows what you want to know about choosing travelers. He's the Victor Service Engineer and his job is to keep abreast of every new development. He will help you select the **right** traveler for any fiber, any blend you may be running. Write, wire, or phone the nearest Victor office for prompt service.

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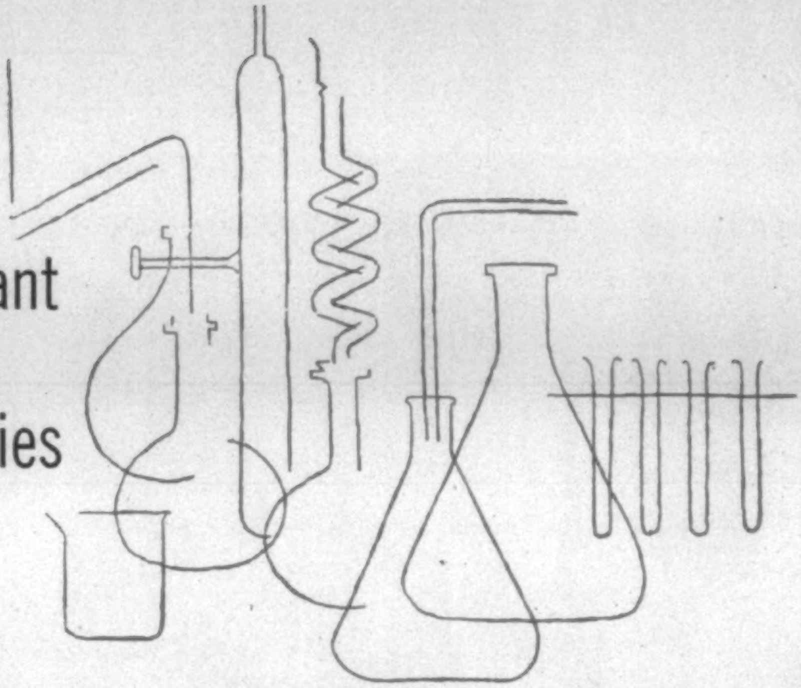

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APPRAMINE*	cationic softeners
APPRETOLE*	anionic softeners
EUMERCIN*	mercerizing assistants
FORMASET*	textile resins
IMPREGNOLE* and NORANE*	water repellents
LANOLE*	tar and grease removers
ORGANOSOL	coatings for textiles and paper
PLASTISOL	for coating and molding
SETOLE*	textile resins
SULFANOLE*	synthetic detergents
WARCOFIX*	color fixatives
WARCO GFI*	gas fading inhibitor
WARCOLENE*	finishing oils
WARCONYL*	fire retardants
WARCOSAN*	wetting and rewetting agents
WARCOSOL*	penetrants
WEAVE-LOK*	non-slip finish

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pigment printing colors for textiles and plastics

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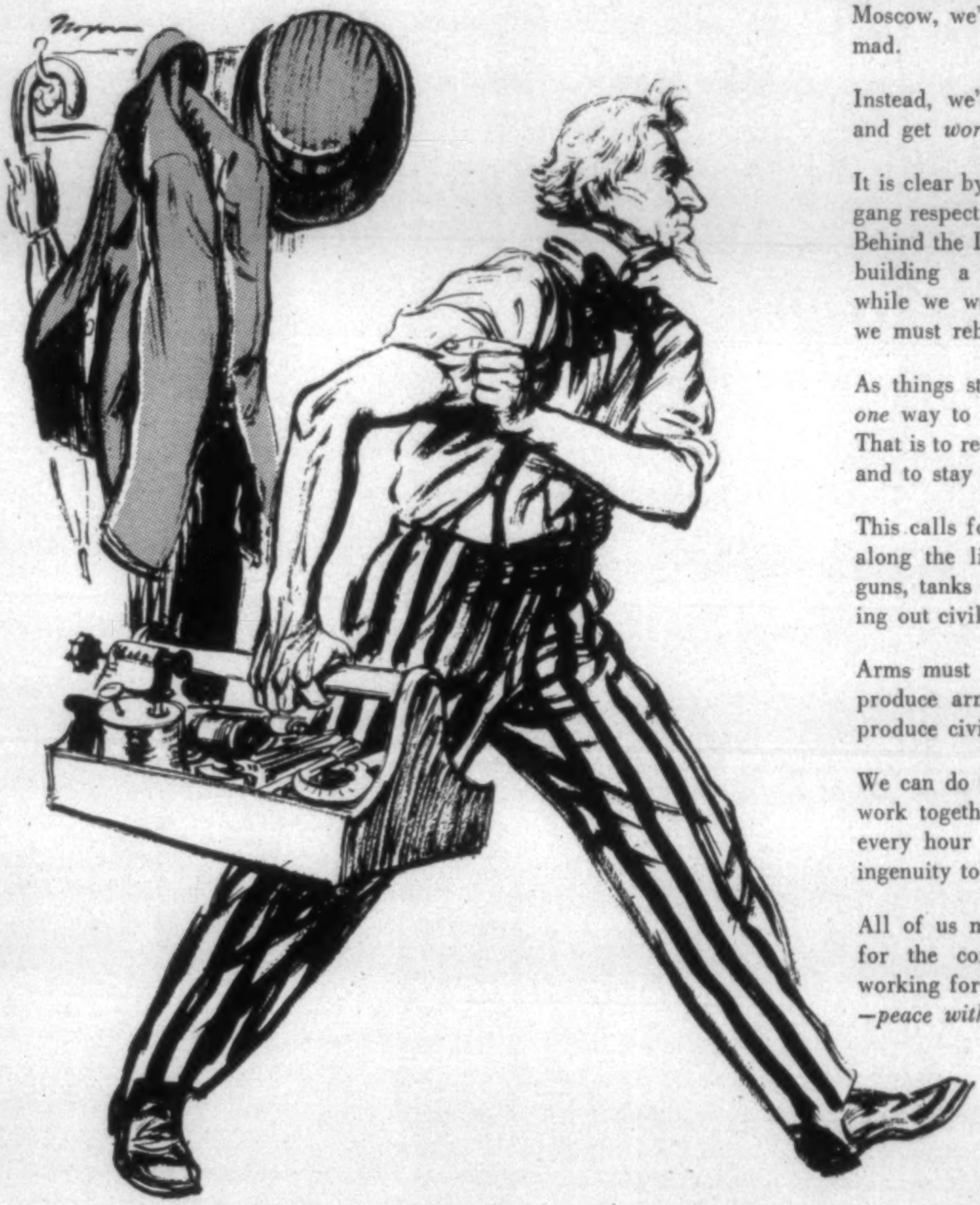
It's time we got *working* mad!



As we listen to the latest insults from Moscow, we're likely to get fighting mad.

Instead, we'd better use our heads and get *working* mad.

It is clear by now that Stalin and his gang respect just one thing—strength. Behind the Iron Curtain they've been building a huge fighting machine while we were reducing ours. Now we must rebuild our defenses—*fast.*

As things stand today, there is just *one* way to prevent World War III. That is to re-arm—to become strong—and to stay that way!

This calls for better productivity all along the line. Not just in making guns, tanks and planes, but in turning out civilian goods, too.

Arms must come first. But we must produce arms *at the same time* we produce civilian goods.

We can do this double job if we all work together to turn out more for every hour we work—if we use our ingenuity to step up productivity.

All of us must now make sacrifices for the common good. But we're working for the biggest reward of all—*peace with freedom!*

THE BETTER WE PRODUCE THE STRONGER WE GROW

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TEXTILE BULLETIN

PNEUMAFIL®

and Mobilization

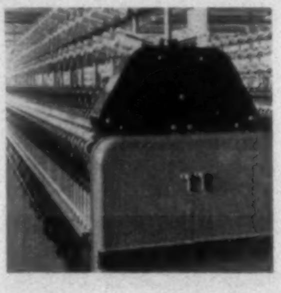
To the textile industry, mobilization means more yarn, more cloth, with fewer spindles than in 1940 .... despite scarcities of raw materials .... shortages of man power .... and shortages of machinery. These fewer spindles are now able to produce more yarn because of mill modernization programs in which the Pneumafil System has played an important part. Today 6,000,000 Pneumafil equipped spindles are producing more yarn with less man power .... with less materials.

Conserves Man Power

Spinners are operating 20% to 40% more sides, and with less work. Piecing up is so simplified that learners can be trained in one-third of the time. Good spinners can be made quickly and from less skilled labor. Because of fewer ends down (about 25%) and because of the elimination of spinning doublings, fewer man hours are required for the same production in spinning .... and in warping, slashing, winding, and weaving as well. Less cleaning labor is required .... fewer sweepers, frame cleaners, blow-off men .... also "week end" cleaning is not required as often. Fewer waste machine tenders are needed because the superior quality of the white waste collected by the Pneumafil System requires no waste machine processing.

Conserves Raw Material

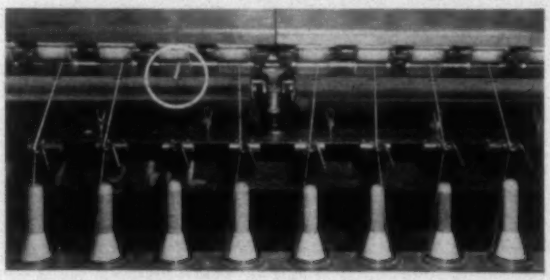
The Pneumafil System opens and collects waste without damaging the fibres. It eliminates the need for waste machine processing or down-grading. The possibility of top grade, scarce raw materials going out of the door as sweeps is eliminated .... there is no spinner waste to drop on the floor. The collected waste may be reused by any mill whether spinning Egyptian or American cotton, wool, worsted, or synthetics.



Increases Production

Higher frame speeds of as much as 18% have been and are being obtained after the installation of Pneumafil equipment .... and with no stoppages for balled up sides .... also ends down reduced by as much as 25%. Work runs smoother and better. Fewer ends down mean better spinning production. Fewer slubs, gouts, and end piecings mean better winding, warping, slashing, and weaving production.

The heavier yarns and coarser goods required by the mobilization program mean spinning bottle necks, which are alleviated with the Pneumafil System. Mills operating the 6,000,000 Pneumafil equipped spindles on cotton, wool, worsted, synthetics, jute, and asbestos are responsible for making the name "Pneumafil" synonymous with increased production per man hour with less labor and raw material .... and with lower cost.



PNEUMAFIL CORPORATION

CHARLOTTE, N. C.

BOSTON, MASS.

Where Can I Serve Best?

WHEN the nation is threatened, every citizen who deserves his citizenship wants to do his part. The urge to serve springs quickly and there are few who do not share it. Sometimes, however, the question, "How can I help?" is not answered easily.

When the flag waves and troops march, many find it difficult to stay at the tasks they know best and some whose patriotism is beyond doubt mistake the nature of their duty. If all could rush into uniform, there would be less confusion of mind.

But, we could win no war that way. Modern warfare calls for tremendous labor behind the front and for a faithful performance of many unglamorous, often tedious chores. It was this labor which spelled the difference in the last war and which again will decide our future.

The men and women who work in textile mills have one advantage over many citizens who are again asking, "How can I serve?" Textile people know how they can serve as guns and bombs. They know, as the Quartermaster General of the Army told them recently, their jobs are those of soldiers at their posts.

Though it be the same job in the same mill that one has had for the last ten or 20 years, it is now a post which must be filled without break to assure victory. Every man and woman at work in a textile mill today can say, and will be right in saying, "This is where I can serve my country best. This is where I should stay — where I will stay."—*Mooresville Medallion,* Mooresville (N. C.) Mills, Inc.

Disappearance Of All-Wool

FOR more than five consecutive years world consumption of wool has exceeded world production. Blankets that cost the Navy $7 each in the recent war now bring $12.50. It is predicted that in 1951 30 per cent of blankets will be combinations of wool and rayon. Much the same change has occurred in socks, clothing and carpets. Over half the Summer suits produced last year contained rayon. "All wool and a yard wide" has lost much of its old meaning. The petroleum refinery and the natural-gas well are displacing sheep; for out of chemicals true synthetic fibers can be made that are fluffy, warm, crease-resistant, mothproof and waterproof. More and more carpets and rugs in which rayon is incorporated are appearing on the market. Why not? There is no overwhelming reason why a carpet or a rug must be of wool. A few of the synthetics are still costly, but the cost is bound to come down. When we remember how rayon crowded silk virtually out of the market the future of wool seems none too bright.

If we are to sleep under blankets that are partly if not entirely of some man-made fiber, and if we are to clothe ourselves in something that looks like wool but isn't, are we destined to shiver in cold weather? There is little difference in the insulation value of wool, cotton, rayon or any of the new synthetics. Insulation depends more on dead air space than on anything else. Hence it is the fluffiness of wool that matters. Hence, too, the fluffiness and softness of the synthetic fibers that have been developed to take the place of wool.

• This trend toward chemical fibers has gained momentum in the last 20 years. If the new substitutes for wool are warm, if they wear well, if they have properties that are desirable in clothing, blankets and carpets, what difference does it make whether or not their fibers were shorn from animals' backs?—*New York Times.*

Rayon & Worsted Suits

A RECENT questionnaire sent out by the Clothing Manufacturers Association elicited some interesting facts about what 488 retail clothiers expect in the way of fiber content of the men's suits they will sell in 1951. Replies received showed that it was expected that 45 per cent of the men's suits for Summer, 1951, would be of all-rayon fabrics; tropical worsteds would be 28 per cent; and worsted and nylon would be 18 per cent of the total, with the balance distributed among other fibers.

In other words, worsteds and worsted with nylon would account for 46 per cent, all-rayon for 45 per cent in their buying in 1951. Considering, however, that lower price goes usually with rayon suitings, worsteds are making a good record by holding to approximate equality of preference. Remember, too, that men who used to buy only one Summer suit a year now are apt to buy a second suit of rayon or part rayon, because the prices of these suits are lower.—*The Clothroom Spotlight,* Hermas Machine Co., Hawthorne, N. J.

Uncle Sucker?

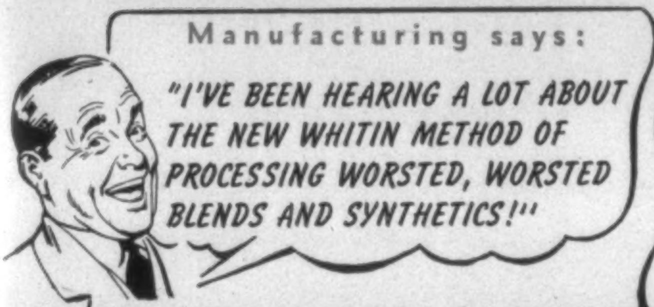
NEVER in history has any nation proved more willing than the United States to come to the aid of others in distress. When an earthquake or other disaster struck a foreign land, America has always been quick to extend a helping hand. In the first World War, we loaned Europe billions—then forgave practically the entire debt. Since the last war, we have sent more billions abroad to help countries wrecked by the war. And our help goes to our former enemies—Germany, Italy, and Japan—as well as to our allies.

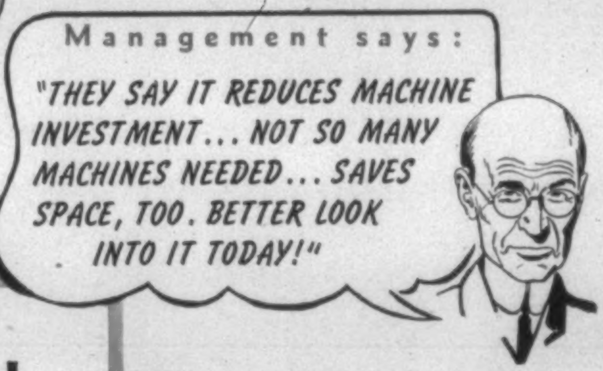
It is not unreasonable to expect those we are helping to help themselves, and to regard Marshall Plan aid not as a windfall from a too-rich uncle, but as a contribution toward world economic stability and peace. Greece is an example. Since the war, American taxpayers have poured over a billion dollars in gifts into Greece—plus our military aid.

For months officials of the Economic Co-operation Administration have been urging the Greek Government to eliminate the inexcusable waste, to institute reforms in its tax system, to reduce its bureauracy, to speed up recovery of industry and agriculture. Little was done as long as Uncle Sam continued to give lavishly and without strings.

But our resources are not limitless. Nor is our patience. Recently the E.C.A. lost patience and made a substantial reduction in Marshall Plan funds for Greece. We are able to help others because we first helped ourselves. The assistance we give other countries is a product of our self-reliance. It must be paid for by the energies and efforts of our people—in taxes.

America never hesitated to give when the need arose. But we can be righteously indignant when, as in


Manufacturing says:
"I'VE BEEN HEARING A LOT ABOUT THE NEW WHITIN METHOD OF PROCESSING WORSTED, WORSTED BLENDS AND SYNTHETICS!"

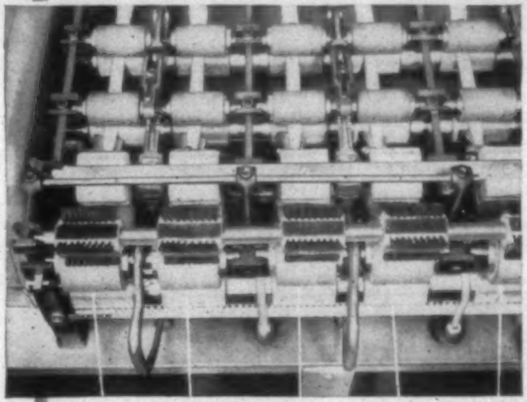

Management says:
"THEY SAY IT REDUCES MACHINE INVESTMENT... NOT SO MANY MACHINES NEEDED... SAVES SPACE, TOO. BETTER LOOK INTO IT TODAY!"

Of course, they're both talking about the AMERICAN SYSTEM

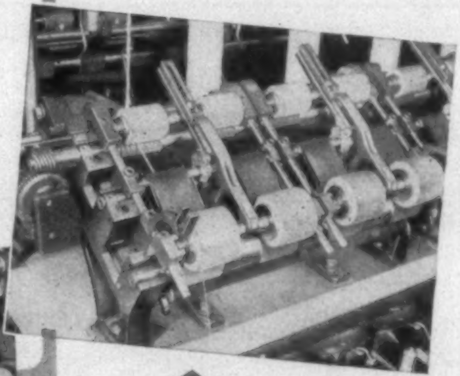
From both manufacturing and management viewpoints, the Whitin-developed American System for processing worsted, worsted blends and synthetics has much to recommend it. It is a very flexible, economical and efficient system for producing quality yarns . . . a system that permits a sharp reduction in the number of processes required—sometimes as much as 50 per cent—with a consequent reduction in the number of machines required. It is designed to process fibers from 1½ inch staple up to 4½ inch staple and worsted counts up to and including 40's.

The American System can be readily supplied on new equipment. It can also be applied to both roving and spinning frames as a changeover on most American-made machines.

Whether as new equipment or as changeovers, the American System permits material reduction in machine investment, saves floor space, and cuts operating costs.



Close-up of Super-Draft Roving frame showing bottom rolls, top rolls, back bars, aprons, cradles, etc., as assembled for operation on the American System.



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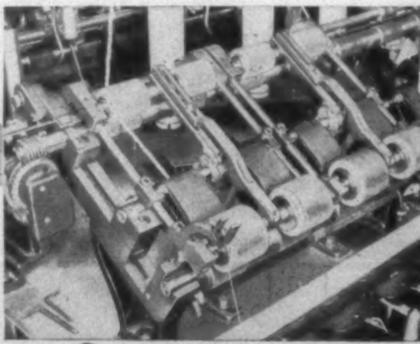

2

Close-up of Spinning frame bottom rolls, top rolls, back bars, aprons, cradles, etc., showing rolls set to

1. *Close setting for shorter staple lengths*
2. *Open setting for longer staple lengths*

Write today for illustrated folder giving complete information about the American System.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

Greece, our material aid is wasted, or when we help re-arm Belgium's army and then are told that Belgian munitions makers are shipping arms to China's Reds to be used against our own boys in Korea.

We should not be expected to carry for evermore the burdens of the world. Others must do their share, according to their ability. We should emphasize that fact. The time has arrived for Uncle Sam to say "uncle."—*Pathfinder.*

Thought For 1951

LARGE governmental appropriations for military purposes mean higher taxes. Higher taxes will of necessity mean the "tightening of belts." Even if inflation is controlled the amount of taxes that will have to be paid by the average individual will be so increased that it is bound to affect spending habits and purchasing ability. We will have to make sacrifices. Let's make them cheerfully.

The chances are that within a very short time certain items will become increasingly difficult to obtain. It is to be hoped that a better job can be done in controlling black markets than was done during World War II.

We therefore can expect to have to do without many things and be satisfied with less. Those sacrifices, although distasteful at times, will be small if by making them we can assist in saving this country from Communism or even from total destruction.

We will be called upon to make another type of sacrifice which is of vital importance to the nation. In order to produce sufficiently to meet the needs of the crisis, longer hours and harder work will be necessary. This does not mean the mere scheduling of more hours per week for schedules mean little unless the hours are actually worked. People have in the past actually commented that they were not too interested in working more than a certain length of time as they would have to pay higher taxes if they worked longer. Such an attitude is not to the best interest of those individuals and is certainly far from satisfactory from a patriotic standpoint.

It is natural to expect some increase in absenteeism when longer hours are worked, particularly during emergencies such as we are now entering during which older people and others who are not accustomed to working are employed. No fault can be found with a person who stays away from his job because of sickness or for other unavoidable reasons. On the other hand, during this crisis a person who just works long enough to get by cannot be considered a good citizen. Manpower available for industry will become scarce as the preparedness program develops. To offset the manpower placed in the armed services and to provide the production that will be needed means that we each will have to work regularly and produce to the best of our ability.

The young men of this country will be called upon to face wartime ordeals. We who are left behind should back them up to the limit by not "soldiering" on the job. When we find the going a little strenuous and our daily work a little monotonous it would pay us to shut our eyes and visualize what it would be like if we were in concentration camps or were being ruled by Communist dictators. Let us not fool ourselves one minute that such conditions could not exist in the United States. The fact is that unless we as a whole people prepare to stop by one means or another the ever-expanding Communist movement, we will of a certainty sooner or later find those conditions in the United States. Our fate might even be worse—if it could be worse—because with the tools of destruction that now exist, this country of ours, which has escaped war damages during the last two wars, might be completely wrecked by atomic warfare.

Although our own individual efforts may seem insignificant, let's not forget that all our efforts added together will in the end mean the success or failure of our nation's program to stop Communism.—*The Textorian,* Cone Mills Corp., Greensboro, N. C.

Types Of Sacrifice

NEVER in the history of our country has there been a greater consciousness of safety. We are spending billions of dollars in order to save our country and its democratic ideals. Safety on land, on the seas, and in the air is a paramount issue in the minds of the American people and their government. In order that the land, the seas, and the air may be prepared for the defense of our country, an all-out effort will have to be made by industry. The burden of that effort will fall on the shoulders of all industrial workers. With this thought in mind, it is the patriotic duty of both the employer and employee to manifest the importance of safety.

Speed will be the cry from those responsible for the production of war materials. Haste is necessary, and because of it there will be more opportunities for accidents. Injured workers cannot produce. It is a challenge to each of us in accident prevention work. Let us start now, in determined efforts that safety shall prevail in our plants at all times during 1951. — *Textile Safety.*

Paradise . . . . Well Hardly!

REMEMBER how the Commies used to sound off about the "workers' paradise" behind the Iron Curtain? They are pretty quiet now, for a good reason. The true facts are coming out—and they're not pretty! Victor Riesel, nationally recognized labor columnist, recently revealed that, for instance:

In Russia, pregnant women and young mothers are being drafted to work in gun factories. The speed-up is being given a new twist. Article 10 of a new Communist law doubles the work-load without raising wages.

In Communist-ruled East Germany, Article 27, Sec. 2, of a new labor code provides for special kindergartens "to make women's work in factories possible," and assure that youngsters get their Communist doctrine early. Expectant mothers must work until five weeks before their confinement. Six weeks after the child is born they must be back at work.

In Soviet "liberated" Poland, even illness—unless very severe—is no excuse for failing to report for work. Any doctor, or factory manager, who gives an employee a certificate excusing him—or her—from work on account of illness is subject to a heavy fine and three months at hard labor if it turns out the worker actually wasn't too sick to stand up and work.

Another Polish law provides that any worker guilty of an unauthorized absence from his job of as little as 20 minutes, may be penalized by a fine of a day's pay. Any Polish man or woman who dares to quit the job is liable to spend six months in jail.

That's right! "Workers' Paradise," they call it!—*Spinning Wheel,* Thomaston (Ga.) Mills.

No. 1 Industry

THE importance of the textile industry to South Carolina was pointed out in the statistics recently presented by State Labor Commissioner W. Fred Ponder.

Of the 172,962 industrial jobs in this state, 124,556 are in textiles. The value of the manufactured products during 1950 amounted to $1,708,383,629, of which textiles accounted for $1,206,433,982.

This accounting shows that textiles are the industrial life-blood in the state. It is this industry that had the predominant share of the $380,833,894 in industrial wages during the past year.

Without textiles, our economy would indeed be poor. It is fortunate, then, that this industry is now operating on a sound basis. As long as this is so, our economic life is practically assured of remaining progressive. The state might well hope that textiles will remain firm. —*Greenville* (S. C.) *News.*

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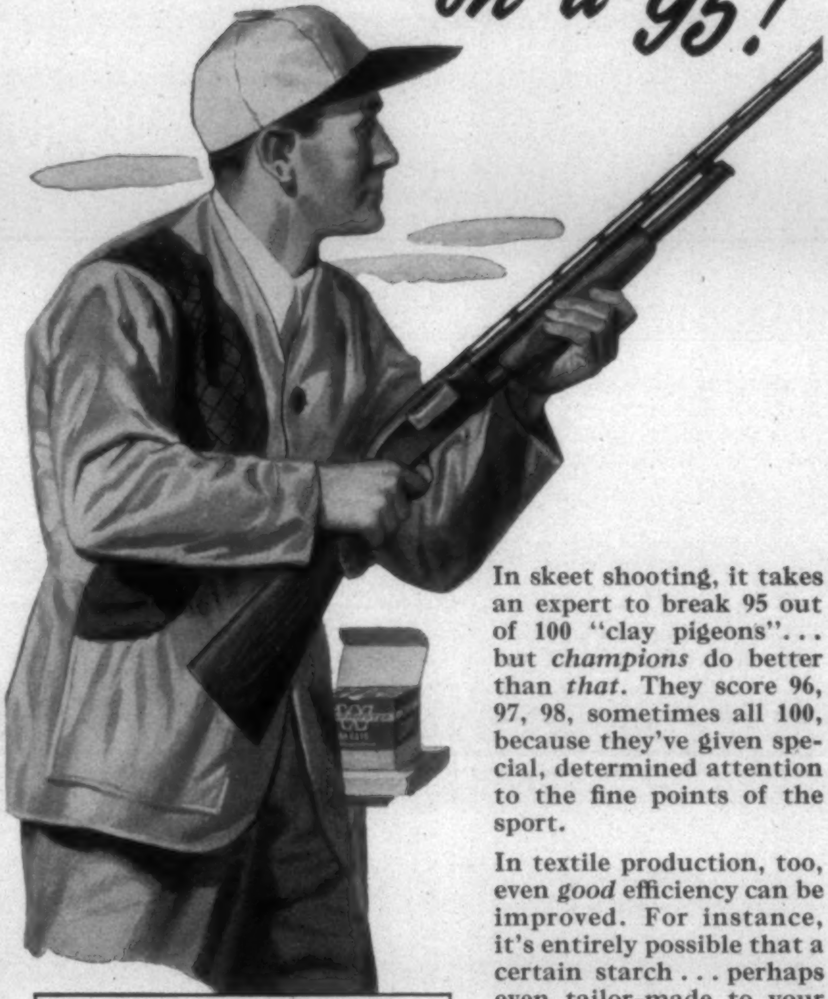

You CAN improve on a 95!

In skeet shooting, it takes an expert to break 95 out of 100 "clay pigeons"... but *champions* do better than *that*. They score 96, 97, 98, sometimes all 100, because they've given special, determined attention to the fine points of the sport.

In textile production, too, even *good* efficiency can be improved. For instance, it's entirely possible that a certain starch... perhaps even tailor-made to your own specifications... could contribute to an efficiency gain.

Why not call your Anheuser-Busch representative? He'll be glad to come and talk it over.

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textile bulletin

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A Visit To I. T. T.

The Institute of Textile Technology having completely revised its type of research through the establishment of an Advisory Committee, our editor was given a cordial invitation to visit Charlottesville, Va., and witness a quarterly meeting of that committee.

Upon reaching Charlottesville we found that the hifaluting type of research, upon which a very large amount of money had been expended, was a thing of the past and that the "scientists," many of whom did not know the difference between a spinning frame and a loom, had put their numerous test tubes in their pockets and sought employment elsewhere.

In their places an Advisory Committee consisting of a group of practical and successful mill men sat around a conference table and discussed the mill problems and machines which were to be designated as research problems.

On the Advisory Committee were such men as Earle Heard, Alex Bell, W. J. Still, T. C. Drew and others of equal ability and standing.

In our issue of December, 1950, we said:

> We do not feel that research can do much for cotton except in the field of improving machines and processes of manufacture and in the very limited field of new uses for cotton goods.

As we heard the discussions which took place around the conference table at Charlottesville, Va., we were pleased that they were directing the research of I.T.T. towards *improving machines and processes of manufacture*.

As we listened to the discussion we wished that there could be, in some centrally located place, a building where mill men, including overseers, could at frequent intervals hold similar conferences and discussions. We feel certain that the textile industry would be greatly benefited if they could be arranged.

When the movement was launched for the establishment of an Institute of Textile Technology we voiced objections upon the following grounds:

(1) That it was not sound thinking to claim that research could do as much for cotton as it had for wool pulp and paper.

(2) That the type of research, which was at that time projected, would not produce results which would justify large expenditures.

(3) That locating a textile research institute in such an isolated point as Charlottesville, Va., would deprive it of valuable contacts with the men in the mills and greatly reduce the effectiveness of the work.

The type of research has now been changed but unfortunately the ill-advised location remains.

Charlottesville, Va., has very poor railroad facilities and cannot be reached by plane.

When the Advisory Committee was in session, there were seated around the table some of the highest salaried superintendents and research men connected with the industry.

The time and services of that group are too valuable to their employers for them to spend much time traveling to a point which is so isolated and very difficult to reach.

Not only were they forced to make long and tiresome journeys in order to reach Charlottesville, Va., but the mills, by which they were paid, were deprived of their services for from three to four days.

Not much objection will be offered to their attending the first two or three sessions of the Advisory Committee but as time goes on and the research projects become less interesting, more and more of them will be missing from the quarterly meetings.

The buildings at Charlottesville, Va., could and should be sold even if the price is much less than original cost.

A location should be secured somewhere upon the highway between Greenville and Spartanburg and a modest group of buildings erected.

Conferences such as we witnessed at Charlottesville, Va., could be held at frequent intervals, if the I.T.T. was centrally located, and many mill problems could be made subject to research and the mills would benefit greatly.

Some day the I.T.T. will be moved from Charlottesville, Va., and become a valuable asset to the textile industry but men who allowed Ward Delaney to locate the Institute at such an isolated spot are not likely to admit their mistake until enthusiasm for a revised type of research wears off and meetings of the newly organized Advisory Committee become less well attended.

The new system, under which research at the I.T.T. will be controlled and directed by practical textile manufacturers, will result in some benefits to the textile industry but a continuation of the isolation handicap will reduce or deny other benefits which would mean much to the industry.

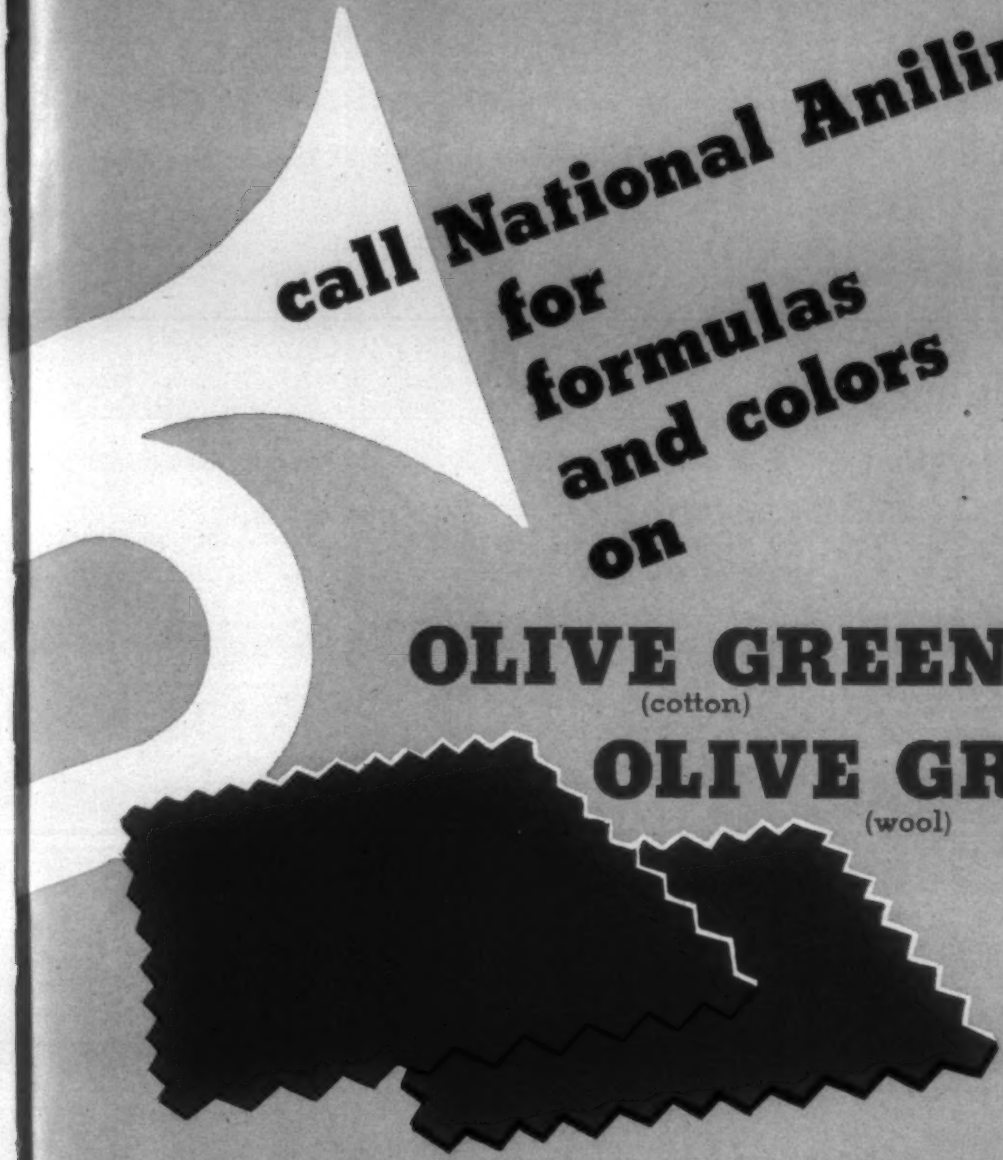
1950 Cotton

The meeting of the Piedmont Division of the Southern Textile Association, held at Charlotte on Dec. 2, 1950, featured an address by Prof. Ivan Feng of the School of Textiles at North Carolina State College, in which he described experiments now being undertaken at the school in the matter of the reduction or elimination of neps.

It is a government-sponsored research project and some of the tests have produced interesting results.

In the audience was a mill superintendent who has many times given evidence of having a very keen and inquiring type of mind.

Like most others, he had been having trouble in obtaining a satisfactory breaking strength out of 1950 cotton



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because the growing season had produced cotton fibers which, in many areas, did not have perfect or fully matured side walls.

One statement by Professor Feng caused this mill man to do some thinking and when he returned to his mill he immediately reduced the beater speeds in the opening room by 15 per cent. When yarns from that cotton reached the weave room there was a noticeable improvement in the weaving.

TEXTILE INDUSTRY SCHEDULE

— 1951 —

Feb. 24—SOUTHEASTERN SECTION, A.A.T.C.C., Purefoy Hotel, Talladega, Ala.

Feb. 28—Conference on new fabrics for the Armed Forces, **A.A.T.T.,** Hotel Commodore, New York City.

March 5-9—Spring meeting and committee week, **A.S.T.M.,** Cincinnati, O.

March 14-16—COMMITTEE D-13 ON TEXTILE MATERIALS, A.S.T.M., New York City.

March 29-31—Annual convention, **AMERICAN COTTON MANUFACTURERS INSTITUTE,** Greenbrier Hotel, White Sulphur Springs, W. Va.

April 3-4—TEXTILE DIVISION, AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Atlanta, Ga.

April 4—A.A.T.T., Builders Club, New York City.

April 13—QUALITY CONTROL MEETING, North Carolina State College School of Textiles, Raleigh.

April 12-14—Annual convention, **ALABAMA COTTON MANUFACTURERS ASSOCIATION,** Hotel Buena Vista, Biloxi, Miss.

April 21—PIEDMONT SECTION, A.A.T.C.C., Raleigh, N. C.

April 23-27—WET PROCESSING EXPOSITION, 71st Regiment Armory, New York City.

April 30-May 4—MATERIALS HANDLING EXPOSITION, International Amphitheatre, Chicago, Ill.

May 2—A.A.T.T., Builders Club, New York City.

May 5—SOUTHEASTERN SECTION, A.A.T.C.C., Atlanta, Ga.

May 7—PIEDMONT DIVISION, S.T.A.

May 12—SOUTH CENTRAL SECTION, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.

May 16-18—Annual convention, **COTTON MANUFACTURERS ASSOCIATION OF GEORGIA,** Sheraton Plaza and Princess Issena Hotels, Daytona Beach, Fla.

May 16-18—NORTH CAROLINA STATEWIDE INDUSTRIAL SAFETY CONFERENCE, Robert E. Lee Hotel, Winston-Salem.

May 17-19—Annual outing, **CAROLINA YARN ASSOCIATION,** Carolina Inn, Pinehurst, N. C.

June 6—A.A.T.T., Builders Club, New York City.

June 15-16—Annual outing, **SOUTHEASTERN SECTION, A.A.T.C.C.**

June 18-22—Annual meeting, **AMERICAN SOCIETY FOR TESTING MATERIALS,** Atlantic City, N. J.

June 21-23—Annual convention, **SOUTHERN TEXTILE ASSOCIATION,** Mayview Manor, Blowing Rock, N. C.

June 29-30—Summer outing, **PIEDMONT SECTION, A.A.T.C.C.,** Myrtle Beach, S. C.

Aug. 24-25—Annual outing, **SOUTH CENTRAL SECTION, A.A.T.C.C.**

Sept. 8—SOUTHEASTERN SECTION, A.A.T.C.C., Columbus, Ga.

Sept. 12—A.A.T.T., Builders Club, New York City.

Sept. 22—PIEDMONT SECTION, A.A.T.C.C., Charlotte, N. C.

Oct. 3—A.A.T.T., Builders Club, New York City.

Oct. 4-5—Annual convention, **CARDED YARN ASSOCIATION,** Carolina Inn, Pinehurst, N. C.

Oct. 17-19—Annual national convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS,** Statler Hotel, New York City.

Nov. 7—A.A.T.T., Builders Club, New York City.

Nov. 8-9—Annual meeting, **TEXTILE RESEARCH INSTITUTE,** New York City.

Dec. 1—SOUTH CENTRAL SECTION, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.

Dec. 3—AMERICAN ASSOCIATION OF TEXTILE TECHNOLOGISTS, Builders Club, New York City.

Dec. 8—SOUTHEASTERN SECTION, A.A.T.C.C., LaGrange, Ga.

—1952—

March 3-7—Spring meeting and committee week, **A.S.T.M.,** Cleveland, O.

June 23-27—Annual meeting, **A.S.T.M.,** New York City.

Nov. 6-8—Annual national convention, **A.A.T.C.C.,** Boston, Mass.

— 1953 —

September—Annual national convention, **A.A.T.C.C.,** Chicago, Ill.

— 1954 —

April 26-May 1—AMERICAN TEXTILE MACHINERY EXHIBITION, Atlantic City (N. J.) Auditorium.

He then reduced by 15 per cent the beater speeds in the lapper room and that was followed by a still further improvement in the weaving.

His explanation is that the inferior quality of the walls on cotton fibers, produced in many areas in 1950 as the result of poor growing conditions, made them subject to more damage by beaters.

By reducing beater speeds, he reduced the damage done to immature fibers and produced stronger yarns.

He says that if there is a normal growing season in 1951 he will return to his former beater speeds.

We pass the above information to our readers with the full realization that the conclusions are the results of experiments made in *only one mill* and also with the knowledge that processes which are successful in one mill often will not produce the same results in another mill.

It is, however, known that growing conditions in 1950, in many sections of the South, were not favorable to the production of normal cotton fibers and that many mills have found it difficult to produce yarns with normal breaking strength.

Means Of Increasing Production

Just prior to World War II, George H. Dunlap, who is now Professor of Practical Research in the School of Textiles at North Carolina State College, was supervising tests in cotton mills of the South under the supervision of the Southern Textile Association. His salary was paid by the Textile Foundation, which was a government agency located at Washington, D. C.

One of the assignments given Mr. Dunlap was to determine the effect of card cylinder speeds upon the quality of yarns made.

In several mills he increased the speed of one or more card cylinders to 180, 185, 190 and finally to 200 revolutions per minute from the normal of 165 revolutions.

Then in each mill he made exhaustive tests upon the yarns produced from the sliver of the high-speed cylinder cards and made comparisons with yarns made from the sliver of cards which operated at 165 revolutions.

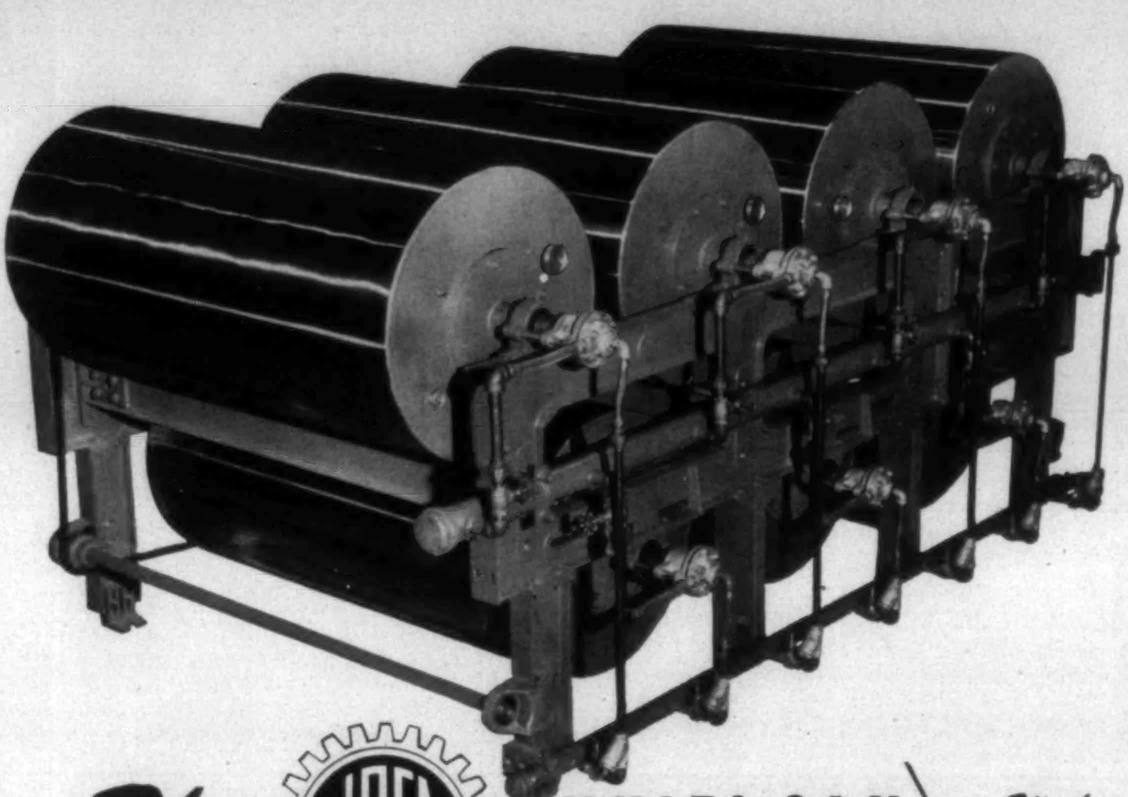
Many mill superintendents threw up their hands in horror at the idea of running card cylinders at 200 revolutions while the more progressive superintendents, usually the younger men, were willing to see a fair appraisal made of the results of the change.

The results were surprising, indeed, for in spite of the great increase in the production of the cards, there was seldom any noticeable decrease in the quality of the yarns produced.

Mill men who were opposed to the higher speed cylinders could seldom select from samples of yarn those made with high speed card cylinders and many times selected yarns from the higher speed cylinders as being the best quality.

Yarn selling agents and yarn buyers were presented with samples of yarns made with 165-r.p.m. cylinder cards and yarns made with 200-r.p.m. cylinder cards but could seldom detect any difference.

Prof. George H. Dunlap still has records of the com-



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With
5, 7, 9, or 11
30" CYLINDERS

The WPF&M Multi-Can Slasher is designed to produce quality warps from fibers suited to this type slasher, at high speed and low operating costs.

Furnished with either 5, 7, 9 or 11 thirty-inch diameter cylinders, the WPF&M Multi-Can Slasher can be adapted and equipped to fill any mill requirement.

If existing head ends and size boxes are in good condition, they can easily be adapted for use with the Multi-Can cylinder section. Or, the WPF&M Multi-Can Slasher can be furnished complete with any of several types of modern WPF&M head ends, drives and size boxes.

The polished, stainless steel cylinders, with welded-in steel heads, can be operated at pressures up to 35 psig. Rotary packless steam joints and sealed, self-aligning anti-friction bearings provide smooth, trouble-free operation. Each cylinder is equipped with vacuum valve, thermometer, condensate trap and flexible pipe connections. Temperature control can be provided for manifold, group or individual cylinder control.

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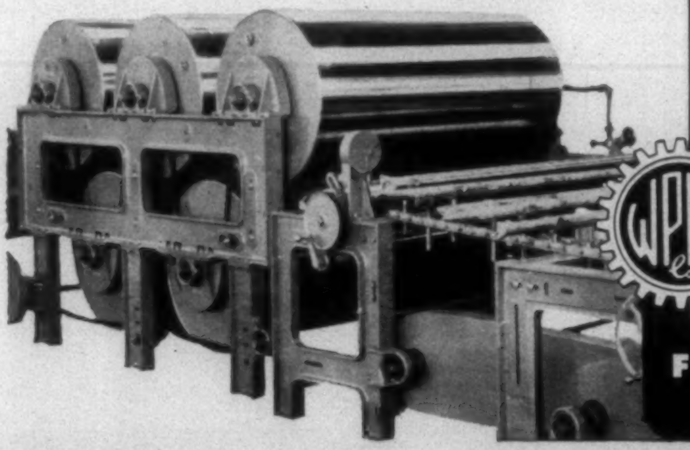

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parative tests which were made in mills which were willing to have honest tests made.

Many marveled at the phenomenal increase in the production of cotton goods during World War II and we attribute much of the increase to the speeding up of card cylinders.

The manager of a rather small mill said to our editor in 1944: "I read about the tests made by Mr. Dunlap and we put our card cylinders up to 200. I estimate that the greater production increased our last year's profits by more than $60,000."

A Southern man who was for some years superintendent of the former New York Mills at Utica, N. Y., says that, when he went there, it was a well recognized fact that Mill No. 4 made yarns of better quality than the other three. He said that an engineer who was employed to make a check found that through an error in the size of a pulley, the card cylinders in Mill No. 4 were running 192 revolutions as against 165 in the other mills.

We can see no reason why higher speed of card cylinders should produce better yarn, and feel that there must have been other factors, but that is the statement made to us.

Since World War II some mills have put cylinder speeds back to 165 but there are many which have continued to run cylinders from 190 to 200 and as far as we know, none has suffered by reason of lower quality of their yarns or goods.

There is now a great demand for cotton goods, for defense purposes, and a substantial margin of profit from each pound, and higher card cylinder speeds mean more pounds.

There are those who contend that higher card cylinder speeds mean lower quality yarns and that both the clothing and the cards will wear out faster and we have no desire to argue with them.

Others feel that production is, at the moment, more important than a slight decrease in quality and that profits from an increase in production should be enough to buy new card clothing and to replace worn parts on cards.

Mills should not speed up card cylinder solely upon the basis of statements made in this editorial but should satisfy themselves by examining the results of the tests made by Prof. G. H. Dunlap just prior to World War II.

They should also speed up the cylinders upon two or three cards and carefully compare the yarns made from the sliver of those cards with the production made from card cylinders operating at lower speeds.

We are interested in this matter only from the standpoint of the immediate need for greater cotton goods production for defense and the increase in profits which may be derived from same.

North Carolina Placed Wrong

The Economic Stabilization Agency, recently established by order of President Truman, groups states into regions and the following are two of them:

Region 4—Maryland, Virginia, West Virginia and *North Carolina.*

Region 5—South Carolina, Georgia, Florida, Alabama, Tennessee and Mississippi.

North Carolina is placed with Maryland which has many large industries, with Virginia which has a shipbuilding industry and with West Virginia which has a coal mining industry.

In the Economic Stabilization Agency will be the Wage Stabilization Agency and the Office of Price Stabilization.

North Carolina, instead of being on the same basis of the states listed in Region No. 5, will have its wage scale and its price control based upon that of states which have an entirely different economy, including coal mining.

It is a situation which is very unfair and may wreck the economy of North Carolina.

We urge that strong letters of protest be filed with Congressmen and Senators, in an effort to have North Carolina transferred to Region 5.

Forty Years In Textile Mills

March 2, 1911, was the date of the first issue of TEXTILE BULLETIN and a very large "40th Anniversary Number" will be published next month.

We expect to publish in that issue a list of those who were employed by textile mills in 1911 and are still connected with textile mills.

From the July 1, 1911, issue of *Clark's Directory of Southern Textile Mills* we have made a list of those who were shown at that time as connected with textile mills and are also shown in the 1950 issue of the same directory.

We realize that some who were in mills in 1911 were not shown because they, being young at the time, did not hold responsible positions and some who are overseers or superintendents now did not have sufficient authority in 1911 to be listed.

We also realize that some names which are shown in both the 1911 and the 1950 directories are not the same men because sons with the same name as their fathers have succeeded them.

We wish the names of all, no matter what their positions are now or were then, who have been textile manufacturers for 40 years or more. We wish to include overseers and master mechanics in the list.

We ask that all persons who have been connected with textile mills for 40 years fill in the blank below and mail it to the Clark Publishing Co., Box 1225, Charlotte 1, N. C.

It is important for the information to reach us promptly. It will be impossible for us to use information which does not reach us before March 9.

In 1911 I was

Position ______________________

Mill ______________________

Town ______________________

In 1951 I am

Position ______________________

Mill ______________________

Town ______________________

Name ______________________

Town ______________________

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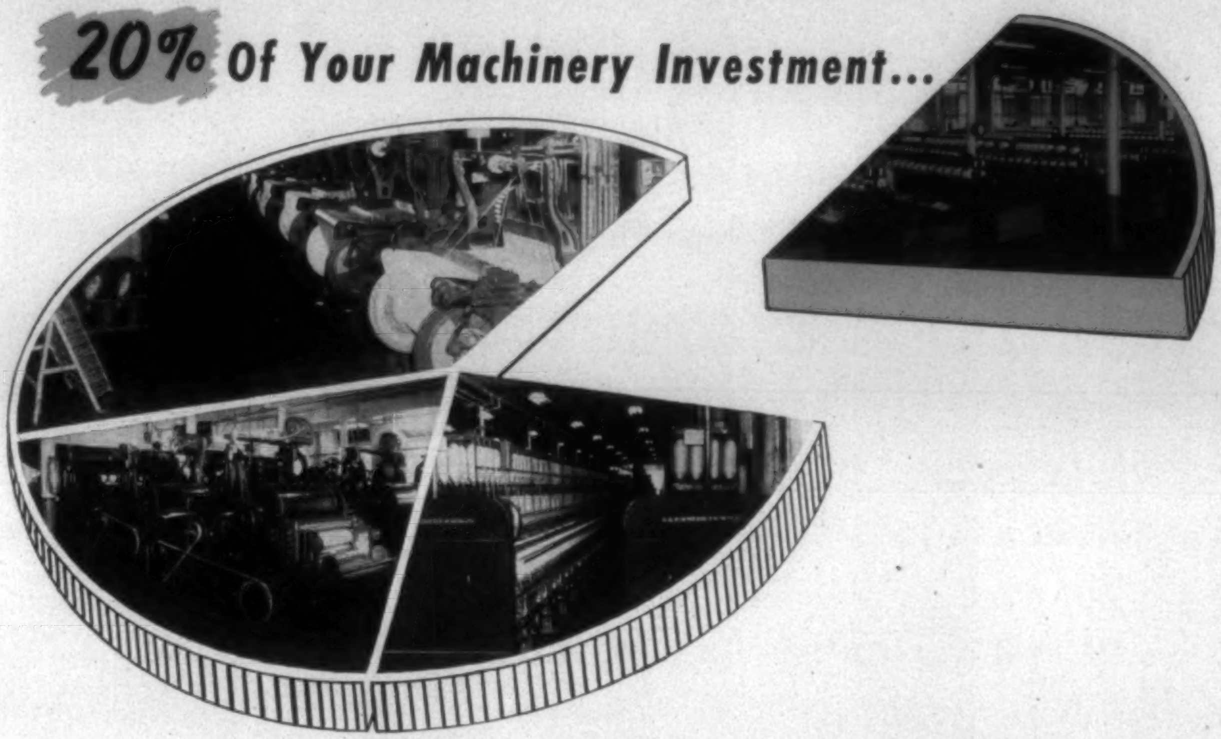

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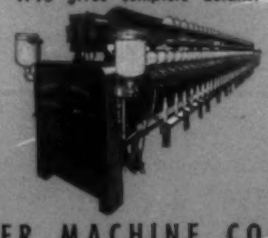

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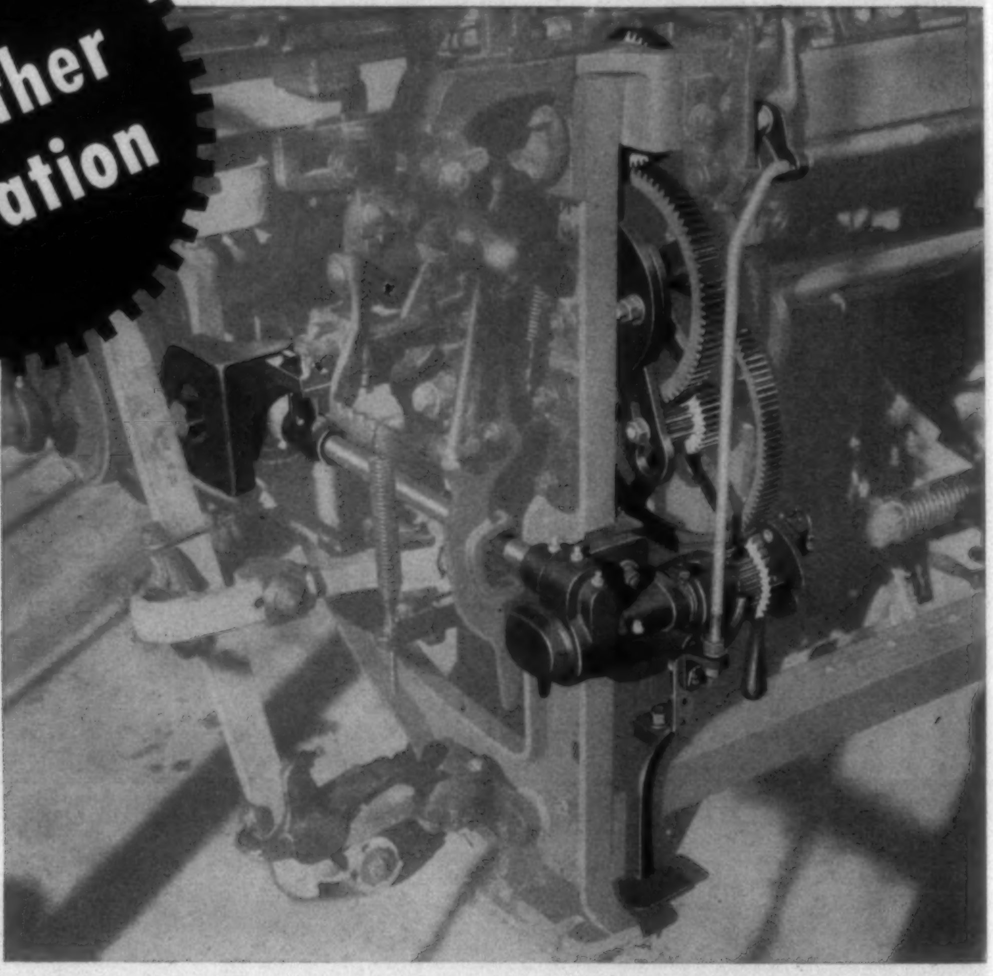

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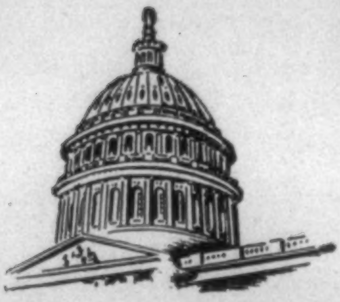

WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

A vast lot of "fat" will be fried out of Truman's budget of $71.5 billion for next year before it is passed by Congress, or before there is any move to increase taxes. Estimates are that the budget contains up to $9 billion of needless and wasteful spending, mostly applicable to Truman's "social gains" objectives. It is described as the most wasteful, extravagant and indefensible budget that Truman has submitted in his six years in office.

Truman's first tax request is for $10 billion, with the implication he will ask for $6.6 billion later. But members of tax committees anticipate that the second request will be for another sum in excess of $10 billion. New tax action will not take place until late in the year, and increases may not exceed $5 billion.

Leaders in both branches of Congress are determined to enforce economy in Truman spending. But they will have to beat down a new "pork barrel" drive by Administration adherents that is taking shape. It is a means of trying to align support for Truman's huge tax increase proposal.

Labor union bosses persuaded Truman not to ask for a reduction of the exemption in personal income taxes, from the present $600, to $500. This reduction would bring in as much in new taxes as will a $4 increase in each bracket levy up to $12,000 of personal income, and probably higher, because $12,000 a year incomes are very limited. The $4 bracket increase would give the nation the highest personal income taxes it has ever known.

Encroachment of regular Cabinet members, led by Tobin and McGrath, on the emergency mobilization powers of economic and price administrators resulted in a half victory for each side. Defense Mobilizer Wilson and Price Controller DiSalle had their wings sharply clipped. McGrath will do all enforcing of price controls, and Tobin will top czar in wage stabilization.

The Truman "freeze" of wages and prices is in reality no "freeze" at all. Wages are being rapidly released from under the ceiling imposed. The net result is that the dual control of wages and prices imposed by Congress is being nullified, and wage "controls" divorced from price controls. With the divorce, the highly "flexible" cost-of-living formula will apply to most wages.

"Flexibility" of cost-of-living index figures is taking on new significance as the wages of two million workers become geared to them in wage contracts. A move is on foot to revise the cost-of-living formula to cover certain "flexible" factors which have not been included before. The result is that index figures may be wholly different in the future from the past.

Labor bosses are urging the Bureau of Labor Statistics to include income tax payments in their cost-of-living index figures. Effect of this change would be to compensate workers for the taxes they pay, and to shift payment of such taxes to employers. This is a fact now where excise and sales taxes are included in the cost-of-living index.

The cold fact is that the cost of almost any item a worker consumes can be shifted to the employer under the cost-of-living formula if the bureau can be induced to include it. Even all forms of insurance might be included, as well as a stipulated sum for recreation and amusement.

Prices have been frozen at their highest point in American history, and the whole action is assailed in Congress as political, with no protection for families with fixed incomes. All mark-ups and bid-ups since June are covered. Oddly enough, dealers who sought to hold down their prices are caught at a lower level of "freeze" than those who raised their prices to the limit.

Among Truman's proposed spending items for next year is $500 million more for public works than was spent this year. Also, there is a like increase of $400 million in aid to states over the aid for this year. Unemployment relief payments, in amount and duration, would be raised to the highest point in the country's history.

Tax-conscious members of Congress toyed with the idea of a sales tax, and decided to abandon it. It was found that a sales tax of ten to 12 per cent would be needed to raise the $16 billion in new revenue asked by Truman, and that it would put a crimp in business operations which would greatly reduce the taxes from corporate earnings and excises. It might even result in a net loss to the Treasury.

Not even the most optimistic tax legislator believes a sales tax could be imposed without a long list of exemptions on "necessities of life." This would include food, medicines, fuel, drugs, gasoline and oil, rentals and many forms of service. The cost of collecting the sales tax would be very high, it was found.

Members of Congress are becoming very tax-conscious of the tax exmeption they enjoy in their big tax-free expense accounts, on which they make no accounting. A similar exemption applies to one-third of Truman's salary, and to his $50,000 expense account. Under Truman's demand for new taxes "until it hurts," bills have been introduced to remove the exemptions.

Internationalists and "aid to Europe" groups are doing loud tub-thumping for Eisenhower for the Republican nomination for the presidency. They hope to pick up a lot of support in the Southern states.

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VOL. 77 FEBRUARY, 1951 NO. 2

Council Meeting Emphasizes Cotton's War Role

THE vital role of cotton in this nation's defense program provided the principal theme for most of the speakers heard at the 13th annual meeting of the National Cotton Council of America Jan. 22-24 at Biloxi, Miss. Council President Harold A. Young of North Little Rock, Ark., emphasized this point when he stated in his president's address: "Cotton plays a crucial role in military mobilization, Even steel must have cotton to function properly. Modern armies move on cotton. No plane flies, no ship sails, no gun fires, and no soldier can survive without cotton."

The demand for cotton would be unprecedented, Mr. Young declared, should this nation become involved in an all-out war. "A total of 11,000 items made of cotton are needed by the Armed Forces," he said, adding that the average fighting man requires 200 pounds of cotton as contrasted to 20 pounds needed annually by civilians. He pointed out that during World War II the Quartermaster General stated that "were cotton suddenly stripped from our possession, not a single one of our fighting men could continue in action."

"Other nations have learned the vital importance of cotton in fighting wars," Mr. Young told the convention delegates. "The chief German supply officer revealed that inability to obtain cotton and the failure of substitutes was a major factor in the breakdown and collapse of the German army."

All officers of the council were re-elected to their fourth consecutive terms of office. The complete slate follows: Mr. Young, president; Oscar Johnston of Greenville, Miss., chairman of the board of directors; L. T. Barringer of Memphis, Tenn., A. L. Durand of Chickasha, Okla., and H. L. Wingate of Macon, Ga., vice-presidents; William T. Wynn of Greenville, Miss., treasurer; William Rhea Blake of Memphis, executive vice-president and secretary; and Lowell Taylor of Memphis, counsel. Re-elected as advisors to the board were Robert R. Coker of Coker Seed Co., Hartsville, S. C., and Lamar Fleming, Jr., of Anderson, Clayton & Co., Houston, Tex.

J. Craig Smith of Avondale Mills, Sylacauga, Ala., a spinner, was one of three new members elected to the council's board of directors for 1951. Spinners re-elected to the board include A. K. Winget, president and treasurer of Efird Mfg. Co., Albemarle, N. C.; Fred W. Symmes, president of Piedmont Plush Mills, Greenville, S. C.; Charles C. Hertwig, president of Bibb Mfg. Co., Macon, Ga.; and Ernest Rees, president of Elk Cotton Mills, Fayetteville, Tenn.

The council has had only two presidents during its existence. Mr. Johnston served as president for nine terms until incapacitated by illness, and Mr. Young has served since the Atlanta, Ga., convention three years ago.

Those in attendance at the Biloxi convention heard an authoritative list of speakers consider the cotton industry from all angles—from that of the farmer to that of the manufacturer of the finished cotton product and the distributors of that product.

"Stronger cottons, more heat-resistant fabrics, and cottons with increased dyeing properties all are promised consumers as a result of textile research," according to Alonzo Bennett of Memphis, a member of the council's utilization research committee. Mr. Bennett stated that research is achieving gains for cotton in its competion with synthetic fibers. Emphasis now is on improving military and civilian cotton products by making available better raw cottons and improving their fiber characteristics.

"Already," he commented, "research has made cotton even more versatile by increasing cotton's highly regarded strength, durability and launderability. Widespread military application of such properties as flame, mildew and heat resistance unquestionably will result in better textiles for civilian use."

The committeeman cited as an example, cotton's greatly increased strength as a result of intensive research conducted by plant breeders. "Cotton now on the market is more than 20 per cent stronger than varieties sold in 1946. Other superior cottons with strengths far beyond those now available are in the offing," he added.

"Today the textile industry is evidencing more interest in research than ever before." As a result of closer co-operation between industry and institutional laboratories, research is directed toward the most essential problems of the industry.

Achievements of the Southern Regional Research laboratory cited by Mr. Bennett include the development of partially "acetylated" cotton fabrics to withstand heat and prolong durability. "When used as laundry press cloths, this fabric gives four times the service life of untreated cotton without impairing the quality of the finish on laundered garments," he stated.

This same laboratory also has made important chemical modifications of the cellulose in cotton fiber. A new process called "aminization" makes it possible to use dyes which previously have been limited to wool and silk. Other modifications alter the rate of moisture absorbency and increase fiber length. "These and other scientific achievements," he emphasized, "present vast opportunities for imparting new and different properties to cotton, with the possibility of engineering cotton textiles more closely for particular mill use requirements."

Does the way cotton is ginned have any effect on the quality of the fiber? The answer to this question is being sought in a painstaking series of tests which were begun during the cotton harvesting season of 1950 and which are still under way, the council revealed. The council reported that the ginning phase of this research has been completed and test lots of cotton now are being spun at various mills to determine how lint cleaning, drying temperatures, speed of ginning and overhead cleaning affect the quality of cotton. Answers to these questions, the council added, will prove valuable to both spinners and cotton ginners since it will provide a guide for more efficient processing to preserve lint quality. In the project, which was recommended last Summer by the council's industrywide committee on cotton quality, plans called for tests of 450 bales of cotton in the Mississippi Delta and California.

A tottal of 75 bales of cotton was processed in each of seven gins. Each gin ran three separate 25-bale series. The 25 bales in each series were divided into five-bale lots. For the first five-bale lot the ginning rate was normal with all overhead cleaning equipment and lint cleaners in use. A second five-bale test was made under the same conditions except that the rate of ginning was higher than normal. A third test was made at a normal rate with lint cleaners, but the cotton by-passed all overhead cleaners except the extractor feeder. The lint cleaner was by-passed in a fourth test.

In the first four tests drying was at a recommended rate. The remaining five bales were ginned under the same conditions as the first except for drying, which was excessive. The series of tests was run three times by each gin. Spinning tests of the cotton ginned last Fall now are being conducted in 18 mills—one mill for each group of 25 bales.

Research has a great responsibility in showing how the United States can best utilize its cotton supplies and thus most effectively serve the nation in this emergency, said Dr. Leonard Smith, Cotton Council utilization research director.

Dr. Smith checked off a five-point program for research in the gathering mobilization effort. First, he said, we must conserve our natural resources of manpower and materials to the fullest extent possible. Second, he urged a greater utilization of research results to best serve the emergency needs of the nation. Third, he urges an augmented cotton research program. Fourth, the giving by the cotton industry of all possible technical and market assistance to the government. Lastly he pointed to the necessity of properly estimating and evaluating military and civilian demands so that the defense program can move forward with the least possible dislocation to the economy.

Research can make a tremendous contribution, Dr. Smith said, by attacking problems made more important by the emergency and by marshalling all the new facts that research develops. He cited fire-resistant finishes as an example of a research development which holds little promise of boosting cotton's use in peacetime but rates high in importance during wartime. On the other hand, luster, a cotton quality improvement important for civilian use, rates low militarily. From now on, attention must be focused on utilizing limited stocks of cotton as efficiently as possible, augmenting research programs and correctly estimating the nation's military and civilian needs.

In emphasizing the need for research, Dr. Smith also pointed to efforts being made in other countries. In a recent Cotton Council study of European research, it was found that England's textile research effort is about ten times as great as the U. S., Sweden about seven times, the Dutch 20 times, and France four times as big after allowing for the relative sizes of their industries. Actually, the speaker said, "the U. S. program should be proportionately much larger than those in Europe because we produce the raw fiber while our European friends do not. The future of cotton is brighter than would have appeared possible ten years ago. Let us not assume new handicaps through failure to meet our country's and customer's demands."

A guest speaker during the convention was William H. Ruffin of Durham, N. C., president of Erwin Mills, Inc., and currently president of the National Association of Manufacturers. Mr. Ruffin has been a delegate member of the council since 1947, representing the spinner group, one of six segments making up the cotton industry organization. Among others heard during the convention were Claude L. Welch, director of the council's production and marketing division; Dr. Charles R. Sayre of Scott, Miss., chairman of the production and marketing division; Read P. Dunn, the council's Washington representative; J. Walter Hammond of Tye, Tex., a member of the council's committee on sales promotion; Ed Lipscomb, director of public relations for the council; A. L. Durand of Chickasha, Okla., a member of the council's committee on utilization research; C. G. Henry, Memphis, chairman of the council's committee on margarine; Dr. Leonard Smith, the council's utilization research director; and Dr. M. K. Horne, Jr., chief economist for the council.

A.C.M.I. Units Move To Aid Defense Act

Initial steps in a voluntary program designed to harness the experience and leadership of the cotton textile industry to the Defense Production Act of 1950 were taken Feb. 2 when the American Cotton Manufacturers Institute launched a series of 17 meetings of producer groups.

Purpose of the meetings was to propose product group committees to serve as advisors to National Production Authority, Economic Stabilization Agency and other mobilization agencies. In addition to these product committees, an Industry-wide Advisory Committee, comprised of one person from each of the product committees, was proposed. This committee will serve as advisors and co-ordinators on matters of industry-wide interest; it also will function as such if industry advisory councils should be required by the Office of Defense Mobilization.

Two groups met Feb. 2 at 40 Worth Street, New York City. Producers of denims and woven colored goods gathered in the offices of the Association of Cotton Textile Merchants at 10 a.m. and chambray and shirting covert manufacturers assembled there at 2 p.m. Selection of the committees provides a practical way to draw on the specific experience of the different producers in their own product fields for the co-ordinated action and planning essential to the most efficient operation of the cotton textile industry and fulfillment of the requirements of the Defense Production Act.

Although combed cotton yarns and carded cotton yarns are major product groups of the industry, no meetings were scheduled for either. The combed yarn producers have already met under the auspices of the Southern Combed Yarn Spinners Association and the carded yarn producers, through the Carded Yarn Association, have already set up an N.P.A. committee. In addition to carded yarn, duck and narrow fabrics advisory committees to National Production Authority have already been established and these committees could be ready to serve in similar capacity for other governmental agencies.

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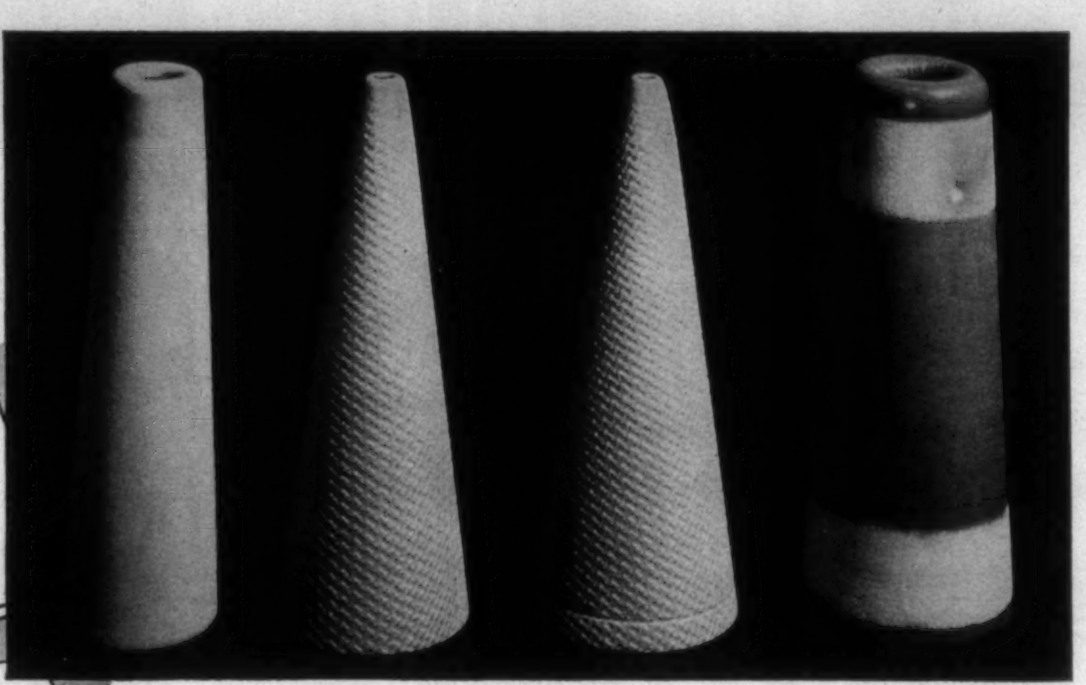

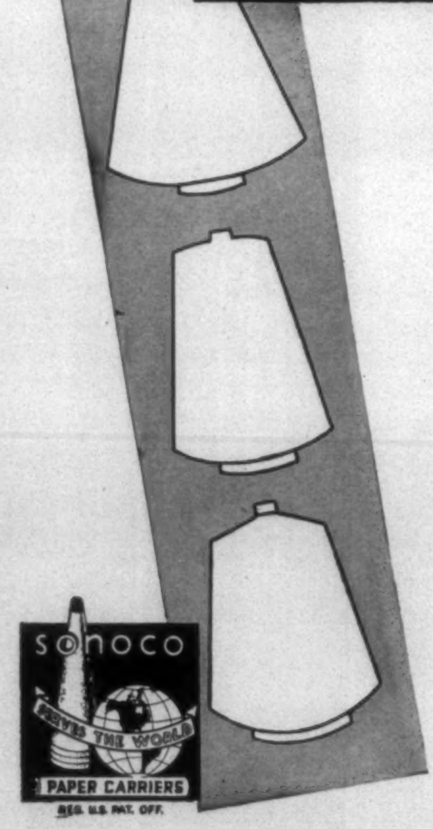

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Statistical Quality Control In The Yarn Mill

– A New Tool to Help Reduce Yarn Variation –

By HAROLD A. Le DUC, Werner Textile Consultants – P. O. M. Co., Industrial Consultants

MILL costs and quality of product are directly related to the variation of yarn count from the specified sizing. Everyone makes tests to see that *average* count is kept within close limits, but not every mill man realizes the importance of reducing the *variation* in average count.

Variation in yarn is of two types: long-term variation and short-term variation. Long-term variation is that which is found between lengths normally taken for routine sizing tests. Short-term variation arises from uneven drafting and results in "twitty" yarn. This latter form of variation cannot be detected from routine sizing tests but can be seen when the yarn is wound on seriplane boards for inspection or when it is passed through some of the new electronic uniformity analyzers.

Most sizing variation can be traced either to wrong gears somewhere in the mill or to too frequent changes of draft gears by overseers and second hands. Statistical analysis of sizing reports can be used both to locate the wrong gears and to show when gears should and should not be changed.

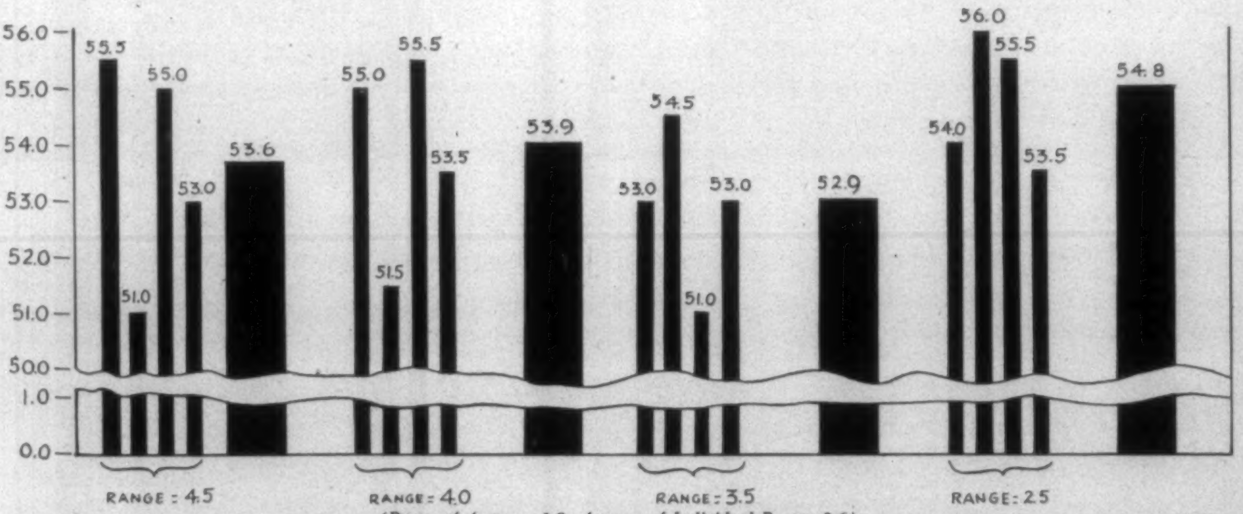
Statistical analysis is a relatively new branch of mathematics which enables us to predict the characteristics of an entire lot of material from tests on a few samples from the lot. Some of the statistician's formulae are of enormous value in the textile mill.

There are many places where we can measure variation and several different ways of measuring it at each place. For example, we can obtain the variation in sizing between successive 12-yard lengths of roving from the same bobbin, or between single 12-yard lengths from several bobbins from one frame, or between the averages obtained for several frames running on the same count. Three types of variations are important in the mill:

(1) *Within Delivery Variation,* V*d.* This is the variation we find when we take successive sizings from a single end. It is the variation measured on a lap meter or a sliver tester. In the early process, its value is dependent almost entirely upon the variation in picker laps. Through the action of doublings after carding, its importance as a long-term variation factor declines rapidly to a level so low that it is seldom measured in the average mill.

(2) *Within Machine Variation,* V*m.* The variation which is found upon taking one sizing from each delivery within a *single* frame is called V*m.* This variation is always with us, as is recognized by the common practice of sizing several deliveries or bobbins from each frame in order to determine its average.

(3) *Over-all Variation,* V*o.* This is the variation obtained when single samples are taken from various deliveries from the *several* frames at a given process running on the same mix and count. In the case of spinning, it is a



(Range of Averages 1.9; Average of Individual Ranges 3.6)

Fig. 1—Effect of Doublings on Variation. Each narrow column represents the weight of a sample of drawing sliver, each from a different delivery. The range between successive groups of four varies from 2.5 to 4.5, with an average of 3.6. But if the variation between the *combined* weights of each group of four is compared, the range between the extremes is reduced to 1.9. This is what happens when ends are doubled between processes. Statistical formulae tell us that the expected variation after doubling can be found by dividing the variation before doubling by the square root of the number of doublings.

pretty fair indication of the variation our customer will have to contend with, although that picture is complicated by the time factor.

As every mill man knows, the variation in card sliver is very high, but after doubling several ends behind a drawing frame, the resultant drawing sliver is much more uniform. If we double again in a finisher drawing operation, the sizing variation is still further reduced. This occurs only in sizing, or long-term variation. Short-term variation, such as is measured on a sliver tester, generally increased with each process, since the bad effects of imperfect fiber control in drafting more than offset the good effects of the doubling.

There is a statistical formula which will tell us exactly what the reduced variation due to the doubling should be. This is:

$$\text{Variation at Process 2} = \frac{\text{Variation at Process 1}}{\text{Number of Doublings}}$$

For example, if it has been found by test that the coefficient of variation between cards is 6.5 per cent, then we should expect to find at breaker drawing, run with six ends up, that the variation has dropped to $6.5\% \div \sqrt{6} = 2.6\%$. That this actually does happen can be demonstrated experimentally in any mill.

FIG. 2

SPECIMEN COMPUTATION OF COEFFICIENT OF VARIATION

Lap-Back Drawing   4 Deliveries per Frame   Std. = 55 gr. Sliver

Jan. 3

Delivery No.	Sizing Results				Range Overall
	Frame No.				
	1	2	3	4	
1	56.1	55.5	56.9	54.6	2.3
2	56.5	57.5	58.3	56.6	1.8
3	53.5	57.1	57.2	55.8	3.7
4	55.9	56.2	56.0	54.3	1.9
Range within machines	3.0	2.0	2.3	2.3	

Jan. 10

	Frame No.				
	5	6	1	2	
1	56.0	56.6	55.2	57.8	2.6
2	54.4	55.9	56.5	58.1	3.7
3	55.6	57.3	55.2	58.5	3.2
4	56.1	57.3	56.5	57.0	1.2
Range within machines	1.7	1.4	1.3	1.5	

Jan. 17

	Frame No.				
	3	4	5	1	
1	54.7	55.3	54.5	53.7	1.6
2	54.0	56.0	56.0	53.7	2.3
3	54.5	54.4	54.9	53.8	1.1
4	54.0	54.6	54.2	54.8	0.8
Range within machines	0.7	1.6	1.8	1.0	

	Total Range	Average Range	Percent Range	Coef. of Variation
Within Machine Variation	20.6	1.72	3.12%	1.53% (V*m*)
Overall Variation	26.2	2.18	3.97%	1.95% (V*o*)

The chart shows how the Coefficient of Variation Within Machines (V*m*) and the Coefficient of Variation Overall (V*o*) can be quickly computed from routine sizing tests. The results from adjacent deliveries within each frame are arranged in columns under the frame numbers. Frames tested on the same day are grouped (preferably in fours) and arranged in adjacent columns. The range (highest value minus the lowest value) in each row and column is then computed and set down. After finding the average per cent range, it is converted to Coefficient of Variation by multiplying by a suitable constant. The constant varies according to the number of samples in each group. For groups of four, the value is 0.49.

This formula can have a good deal of practical application in the textile mill. For instance, the sliver cans or roving bobbins from any one process are creeled in fairly random order in the machines of the following process. Therefore, the variation carried forward to any one process, call it No. 2, is the V*o*, or over-all variation of the preceding process, which we may call No. 1. If all the deliveries within a given frame are identical, then the variation within that frame, V*m*, will be that predicted by the formula. Also, if every frame is like every other frame, then the over-all variation, V*o*, will be the same as the V*m*'s of the individual frames, and will also be that predicted by the formula. On the other hand, if we find that V*o* for Process 2 is greater than the V*m* at that process, we know we must have differences between the various frames.

In actual practice, we find that within one frame, where all the deliveries are controlled by a common set of rolls and draft gearing, there is very little that can happen that will introduce long-term variation. Such instances as we do find are generally traceable to missing or defective weights on the top rolls, or too badly worn or "slick" top rolls. Variations between machines affecting the over-all variations commonly occur. These variations result from wrong gears in the draft train (including tension gears), slight differences in draft constants in different makes or models, etc.

Let us look at some examples from actual practice. The follow-data are from two different mills using two-process conventional drawing, each with six ends up.

MILL A

Process	V*m*	V*o*	Theo.
Carding	——	5.5%	——
Breaker Drawing	2.3%	3.5%	2.2%
Finisher "	1.3%	1.5%	1.4%

MILL B

Process	V*m*	V*o*	Theo.
Carding	——	6.5%	——
Breaker Drawing	3.2%	2.9%	2.6%
Finisher "	1.5%	1.6%	1.2%

First of all, let us look at the within-machine variation, V*m*, for breaker drawing. In Mill A, the theoretical, or expected value is 2.2 per cent. This is found by dividing the observed carding variation of 5.5 per cent by $\sqrt{6}$ The actual value was 2.3 per cent, which is a very good correlation. In Mill B, the carding variation was higher, at 6.5 per cent, and the best that could be expected at breaker drawing was therefore 2.6 per cent. Actually, it was 3.2 per cent, indicating that some variation might be added, although it would be best to run another test to make sure. In this, as in all statistical work, it should be remembered that all values obtained in practice are estimates, and that successive tests on the same subject will vary slightly from each other.

The over-all variation, V*o*, at breaker drawing presents quite a different story. In Mill A it has jumped to 3.5 per cent, 60 per cent higher than the expected value. In Mill B it is 2.9 per cent, only 12 per cent higher than the theoretical. This should immediately indicate to us that there are differences between the frames in Mill A. Actual investigation showed that Mill A had been changing the draft gears on individual frames based on observed difference in daily test averages. The result was that the different

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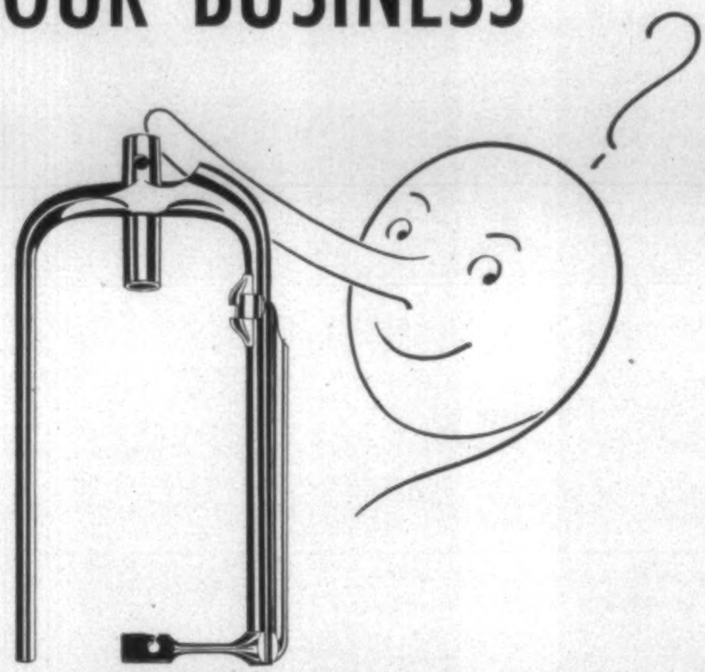

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machines were actually operating at different drafts and introduced excessive variation into the process.

This is a very common error at this point. It should be remembered that there is still a large variation at breaker drawing, with the result that successive tests on the same frame show a large variation from test to test. Therefore, changes should not be made on one set of tests. Much better results will be obtained if the machines are first carefully checked and standardized, and then left alone. When a change must be made, as in the case of change of season or to a different cotton, then all frames should be changed together.

Both mills are doing very well at finisher drawing. Mill A could not be better, and Mill B is introducing only a small amount of additional variation. Note that the theoretical values for each process are computed from the *actual* values of the preceding process. This technique permits each process to be studied by itself, and the mill management can concentrate remedial action on the process that needs it. For instance, it is not necessary to bring the pickers or the cards to perfection before studying the drawing processes.

This method of analysis can be continued right up through twisting. Unfortunately, some complications set in. The first of these is that all deliveries are not exactly like all other deliveries, and each machine is slightly different from the others. Another difficulty is that the formula we used assumes that the same *weight* of material is used to measure the variation at one process as was *combined and measured* when creeled at that process. For example, if our carding variation was based on tests of five-yard samples averaging 50 grains per yard, then each test length weighed approximately, 250 grains, and when combined behind the breaker drawing it would have a total weight of 6 by 250, or 1,500 grains. In order to verify the formula we should therefore take samples of drawing sliver, each weighing 1,500 grains or 30 yards.

We have found that in practice, corrections in the theoretical values can be made more or less arbitrarily so that a table of standard expected values can be built up for each mill without disturbing its normal sizing routines. The values vary for the type of stock, the draft organization, and the equipment used. A few tests quickly establish these values. The mill then has a yardstick which can be used to determine both whether it is controlling its variation within reasonable limits, and where to look for trouble if it exists.

It takes but a few minutes to compute the variation from regular sizing data. A typical computation is demonstrated in Fig. 2. It is not necessary to make these calculations for every process daily. When the system is first installed thorough tests are made and once standards have been established, it is necessary only to check the V_m at key processes (e.g. finisher drawing, final roving and spinning). The need for more complete calculations arises only when off-standard conditions are discovered.

The application of statistical methods to sizing is an economy measure which can cut costs without loss of reliability. Two cost saving procedures are immediately evident. *First,* whereas the same variation check may be accomplished by regularly testing every machine in the mill, statistical methods actually locate the trouble spots at the same time. The ordinary system requires many more tests beyond the original machine tests to find the source of variation. *Second,* statistical methods help improve quality of product at no increase in the cost of testing.

These economies point to a new area in the textile industry where modern management techniques can be used to keep up with a competitive market.

Mr. Le Duc's paper was prepared by him exclusively for TEXTILE BULLETIN; the original longer and more general paper was delivered at a meeting of the American Society for Quality Control at New York City.

A.C.M.I. Statistical Division Is Moved

Announcement was made Jan. 29 by the American Cotton Manufacturers Institute, Inc., of the movement of its statistical division from New York to Charlotte, N. C., and the appointment of William T. Shymanski as chief of the division.

In a notice sent to its approximately 800 members, the institute indicated that all statistical inquiries as well as general correspondence regarding statistics should henceforth be directed to the Charlotte office at 203-A Liberty Life Building. This division was previously located in the organization's New York office and its impending movement to Charlotte was announced several weeks ago by George P. Swift, president of Muscogee Mfg. Co., Columbus, Ga., and president of the institute for the current year. Mr. Swift stated that the move was being made as an efficiency measure.

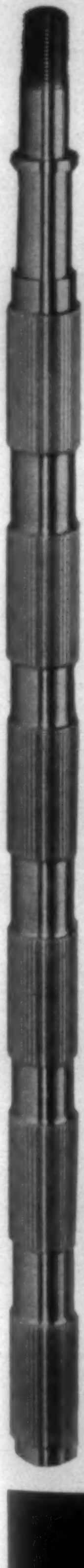
This work was formerly under the direction of Paul B. Halstead who for many years was secretary-treasurer of the Cotton-Textile Institute, an organization dissolved in 1949. Mr. Halstead will retire effective Feb. 28. Mr. Shymanski, the new chief of the institute's statistical division, has been employed in textile trade association work for approximately 15 years, during the major portion of which time he has been actively engaged in the compilation of textile statistics. Mrs. Sue Mitchell, who has performed similar work for the institute for a number of years, has also moved from New York to Charlotte and will continue with the statistical division.

F. S. Love, Charlotte, secretary-treasurer of the institute, in commenting on the movement of the statistical division, indicated that there would be no other changes in the work being done in Charlotte. A.C.M.I. is the over-all cotton textile trade association for the nation's mills and has its home office in Charlotte with branches in Washington, New York and Clemson, S. C.

The A.C.M.I. Washington office was moved Feb. 1 into the new Cafritz Building at 1625 I Street, N. W., less than two blocks from its old location. An A.C.M.I. spokesman said the new offices contain about double the space formerly used in the Defense Building.

For English Translation, Stand On Head

That things aren't always what they seem was embarrassingly illustrated recently at the cotton division of Pacific Mills, Lawrence, Mass. The cotton division purchased a print design featuring two Egyptian vases decorated with allegedly authentic hieroglyphics. However, the design was quickly forgotten when the foreman discovered that, upside down, the "Egyptian hieroglyphics" became plain English. On one vase was the word "His," on the other "Hers."



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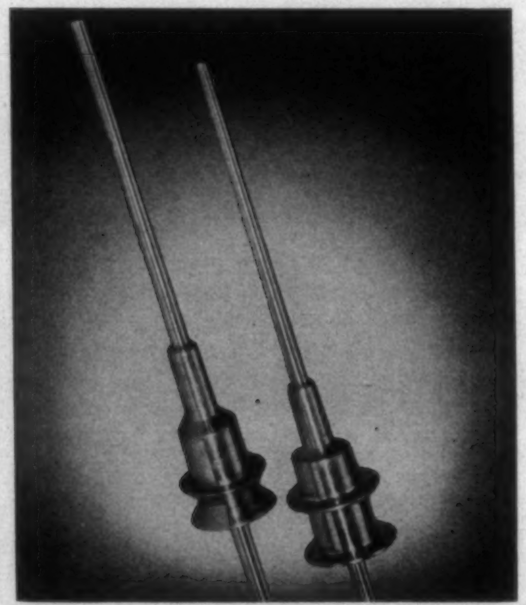

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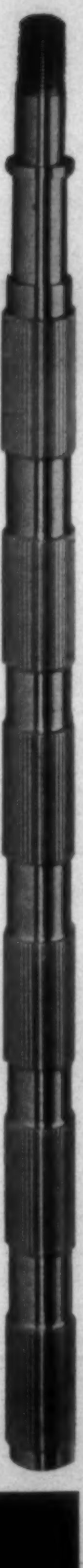

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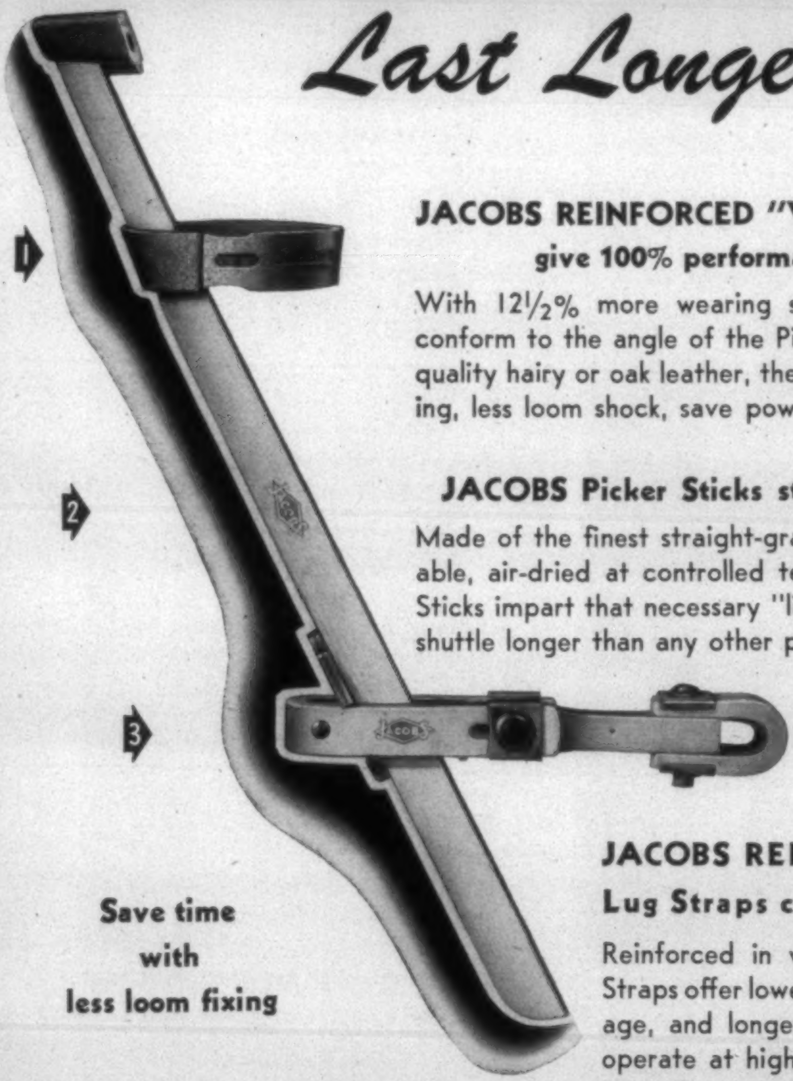

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Warp Preparation & Weaving

— A Review of the Literature —

Cotton Yarn Sizing Materials, Preparation and Practices

By W. E. SHINN, C. BOYCE SINK and MARY E. PARKER, North Carolina State College School of Textiles

Part Two – Size Preparation

IN OUR search for literature pertaining to cotton yarn sizing materials, preparation and practices, it was found that there are few books of reference and that most of the material available is in the form of magazine articles. The available references were reviewed and are summarized in this report, work for which was done under contract with the United States Department of Agriculture and authorized by the Research and Marketing Act. The contract is being supervised by the Southern Regional Research Laboratory of the Bureau of Agricultural and Industrial Chemistry. References (superior numerals) were listed at the end of Part One.

The first installment of this report (Jan., 1951, issue of TEXTILE BULLETIN) discussed sizing materials. The final installment, to be published in this magazine, will cover sizing practices.

The International Correspondence School Staff[8] reports that "When a drastic change is made in the sizing requirements, usually necessitated by a wide variation in yarn counts, the size mixture ingredients are generally varied.

"Corn starch, for instance, fulfills most of the requirements as a sizing base for most yarn counts from 30s to 40s. Corn starch, however, has a tendency to form a brittle size film, but the addition of a softening material usually counteracts this tendency. The starch, when corn is used, will show a greater stability of viscosity after gelatinization; that is, it will thin less than a size mixture made from potato or tapioca starch.

"Sometimes tapioca or sago starch is substituted for corn starch, especially if corn starch is more expensive than the other starches. Ordinarily, tapioca starch gives a greater degree of penetration into a yarn structure than do most other starches. Sago starch produces a thin, strong, but very harsh size film, which, in many instances, tends to cut the heddles of the harnesses at the loom. Wheat starch is used when a very heavy coating of size is desired on a yarn, especially if the yarns are to be weighted.

"Potato starch generally produces the smoothest size film of the thick-boiling, or natural untreated, starches. It maintains a fairly uniform viscosity and is well-suited for sizing the higher counts of yarn. The outstanding advantage of potato starch, which is possessed also by most thin-boiling starches, is that it is very slow to congeal. This characteristic produces a flexible size film about a yarn and allows the yarn to adjust itself to most stresses and strains that might be placed on it during slashing but before the size film congeals. Because potato starch is slow-drying, a yarn sized with it tends to stick to the drying cylinders of a slasher, so a softener must be added to the size mixture to lubricate the yarn as it passes around the cylinder.

"If the size film about a yarn is hard and brittle, a little softener added to the size mixture will soften and add pliability to it and will impart to it a softer feel to the hand. If, for any reason, the size film is too soft, gum added to the mixture tends to strengthen it. . . ."

"However, such factors as the number of turns of twist in the yarn to be slashed, the character of the yarns, the fabric for which the yarns are intended, and even the atmospheric and climatic conditions about a mill, all tend to vary the size mixtures. A rule sometimes followed to determine the amount of softener required in a size mixture is to use sufficient softening material to equal approximately ten per cent of the amount of starch. All determinations are considered as pounds of each substance. Sometimes turpentine is added, but only in small quantities for the purpose of cutting the natural oils and waxes in cotton. Usually, turpentine is used only in slashing Egyptian yarns because of their waxy nature, and then, only one gill is added to each 100 gallons of water."[8]

Pirozhenko[14] conducted plant-scale experiments on cooking a size of wheat and rye flour and using lime instead of caustic soda. In some sizes, fats were incorporated as soap emulsions or liquid soap was used. These sizes tested in production gave very satisfactory results. Even when no fats were incorporated, the size did not stick to the rolls of the sizing machines or to the drying drums. Sizes containing fats in which lime replaced sodium hydroxide gave satisfactory results. Sizes made with lime but without fats were less satisfactory.

The I.C.S. Staff[8] "found from experience that size mixtures for cotton yarns are preferably composed of starches and tallows, as these materials form the best adhesives and softeners. . . ."

For yarns between 60s and 80s, they suggest formulas of 50 pounds of starch to six pounds of softening for a light sley and pick and 65 pounds of starch to seven pounds of softening for medium sley and pick. The gelatinization temperature was found to be approximately 168° F. for corn starch and 150° F. for potato starch. The time required to raise corn starch to 210° F. was 30 minutes while potato starch required 40 minutes to reach the same temperature.

Tables I and II as taken from *Cotton Warp Preparation*, I.C.S. Staff, are as follows:

TABLE I

Amount of starch and softener for size mixture.

Count of Yarn	Light Sley and Pick Starch lbs.	Light Sley and Pick Softener lbs.	Medium Sley and Pick Starch lbs.	Medium Sley and Pick Softener lbs.	Heavy Sley and Pick Starch lbs.	Heavy Sley and Pick Softener lbs.
30s to 40s	35	4	40	5	50	6
40s to 60s	45	5	50	5	65	7
60s to 80s	50	6	65	7	80	10
80s to 100s	65	7	80	10	90	12

TABLE II

Temperature and time of starch gelatinization

Starch	Gelatinization Temperature Degrees F.	Time to Raise to 210° F. (Minutes)	Remains 210° F. (Minutes)
Corn	168	30	60
Potato	150	40	90
Tapioca	163	30	60
Sago	164	30	45
Wheat	176	30	40

Lubricating and softening are not the same thing, but may often be confused because most fats act as both. In analysis, fats are generally divided into saponifiable and unsaponifiable fats. The properties vary considerably from one fat to another. Sulphonated fats are good softeners but poor lubricants; mineral fats are much better lubricants, but not nearly so good as softeners.[16]

According to Hart[6], "There are two prevalent methods of adding ingredients other than starch to the mix. One method is to add them at the start with the starch; the other, after the starch has been cooked. One mill has tried a number of methods of adding the auxiliary sizing materials and find no objection to adding all the ingredients with the starch except raw tallow, which is preferably added after the mix is cooked. . . ."

"There seems to be no hard-and-fast rule regarding the amount of softener to be used in warp sizing; therefore, each mill uses what it deems best. The British Cotton Research Association found that up to five per cent of softener on the weight of the starch did not appreciably reduce the adhesiveness of the starch, but beyond that figure there was a gradual reduction in the strength of the starch film. It is believed, however, that in batches where one pound or more of starch is used to one gallon of size, the softener can be increased above five per cent without appreciably decreasing the strength of the starch film.

"The acidity of the softeners should be low, as otherwise the squeeze-rolls of the slasher may be affected. Emulsified softeners are preferred over raw oils and fats since they mix more uniformly, allow better penetration of the size, and form smaller globules of fatty matter. It is stated that excess fat may have a tendency to interfere with the proper penetration of the size and also to reduce the transparency of the starch-paste. On the other hand, it is to be noted that softeners tend to increase the resistance to rubbing. It is also claimed that the fatty ingredients in a sizing compound have a tendency to reduce the rate of congealing of the starch, with the result that the size will remain fluid while passing through the squeeze rolls and until its water content is evaporated on the slasher drum or cylinder."

Hart[6] also reports that "A mixture of starch and water upon heating sets to an apparent gel, the viscosity of which increases with temperature to a maximum and then decreases upon continued boiling. It is stated that the larger starch granules begin swelling at a lower temperature than the smaller ones and that the swelling of the smaller granules is a slower process. It has been definitely shown that for a given starch there is no well-defined pasting temperature but rather a temperature zone of paste formation. The viscosity of starch paste is akin to that of a suspension rather than that of a colloidal solution like a gelatin solution. The drop in viscosity on continued heating or stirring is attributed to the breakdown of the swollen granules and the disintegration of the sacs. It is stated that, in general, the viscosity of a starch-paste for satisfactory sizing purposes should be thin enough to give satisfactory penetration and thick enough to take up the proper amount of size."

Effect of Acid and Alkali

"The addition of acids to starch-paste in concentrations as low as 0.0025 N causes a pronounced decrease in viscosity. The addition of alkalies causes a rise in viscosity followed by a decrease. . . ."

Effect of Calcium Chloride on Starch Paste

Hart[6] says, "Extremely thick and adhesive solutions are formed when a concentrated solution of calcium chloride is boiled for three or four hours with starch, converting it into a soluble form. . . . It is believed that this salt causes the formation of a firmer gel structure."

Moisture Absorbing Properties of Starch Films

"The various starches are all about equal in moisture absorbing capacity. Starch alone boiled and dried absorbs about twice as much regain-moisture as raw cotton and is, therefore, no mean weighting or deliquescent agent. Starch films at a relative humidity of 80 per cent or over become soft and plastic, yielding readily to any stress, although the strength of the cotton yarn itself is improved. Hence, exposure of sized yarn to high humidities or the use of highly deliquescent size is not desirable."

Effect of Softeners on Flexibility

Hart[6] states that "brittle films are produced when an excess of hard fat such as tallow is introduced, the deterioration in flexibility becoming marked when more than about five per cent of fat is present. These observations suggest that excess of fat may give rise to the dusting of size which is troublesome in some mills, and this is borne out by observations in the laboratory."

Hart[6], in writing on the subject of tensile strength and flexibility of starch films, states that "Starch films have tensile properties similar to those of ductile metals and there is apparently little difference in this respect between one starch and another. Experiments have been made on the

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tensile strength of films made by drying starch-pastes such as are commonly used in sizing. The results show that starch films are more brittle in dry atmospheres than in moist. Weaker films are obtained if the starch has been partly dextrinized, oxydized with hypochlorides, or otherwise more or less solubilized; furthermore, any admixtures such as soap, glycerine, oils, or fats tend to weaken the starch-film although such admixtures may be desirable on other grounds. Moreover, drastic chemical treatment or the use of alkali, soap or excess of hard fat renders starch more brittle."

Jambuserwala[9] states that "There is a sharp initial fall in the viscosity of starches on modification. . . .

"It is observed that with the decrease in the viscosity of starch-pastes, penetrating properties increase. . . . Further, the results reveal that wheat starch has the greatest penetrating power, followed by corn, sago and farina in decreasing order of penetration.

"Modified starches, being less viscous, produce lighter coatings on the surface of the fiber, though the quantity of starch penetration may be greater. Hence what is gained by penetration by way of increase in energy of rupture on sizing with modified starches, is partially lost by the thinner surface coating on the fiber. However, compared on the basis of increase in energy of rupture of yarn per unit increase in weight of yarn on sizing, the modified starches are found to give greater energy rupture to the sized yarn than the untreated varieties."

The inherent tendency of raw starches to thin down on continuous boiling and stirring, is eliminated on modification. The modified products, once brought to the boiling temperature in their aqueous solutions, do not tend to lose in their consistency by subsequent prolonged heating, and they give smooth, homogenous pastes in a much shorter cooking period."

Bolt[2] makes the following recommendations for boiling corn starch: He prefers eight to ten pounds of compound to 100 pounds of starch used. The starch is added to the cold water in the size kettle and stirred well for about 15 minutes. At least 20 to 30 minutes should be used to bring the starch to the cooking temperature of 108° F. He has found that it is better to add the gum and compound after the size gets hot or about the time it comes to the cooking temperature. "Regardless how long the size is cooked, it should all be cooked the same length of time as this aids in uniformity." He also discusses the mechanical condition of the slasher and the running of ply selvage.

Dutt[4] gives a brief account of the sizing practices used in India and some important points for selecting ingredients for mixing sizes.—*(To be concluded.)*

SO YOU WANT GOOD CLOTH!

By **FRANK D. HERRING**

Part 22 – Throwing the Shuttle Out

IN the two previous articles I have covered looms slamming off and looms stopping off. I am proceeding in this order for a specific reason, and the reason is-I want to impress on the reader's mind the absolute necessity of doing first things first when building, checking and fixing a loom. Later in this series I will cover the many things which causes a loom to make defective cloth, but first I am trying to cover the things which cause the loom to stop off, because a loom cannot make bad cloth if it is not in operation. First things first, I will continue to use this phrase often because I want to try and make sure that the reader will fall in line with me and follow my chain of thought and realize that first things must be done first or the fixer will be working in a confused state of mind and his haphazard procedure will result in defeat of his objective, and most of his efforts will be wasted.

For instance, when I say check the pick motion I mean to check first things first. Start at the parallel and work back to the pick cam and time the pick cam last, because if the pick cam should be timed first, and then adjustments made on any other parts of the pick motion the time of the pick will be thrown off. This will apply to any other motion on the loom. First things must be done first to get the job done quickly, easily and effectively. It has been my experience that too many loom fixers do not have an orderly course to follow when working on a loom for any given trouble. To be a good loom fixer one must think, study his work, pocket his pride, and be willing to work with and learn from others. If he is not willing, or capable, of doing the above mentioned things he will never be a good loom fixer and will always be a confused dissatisfied man on the job, and a very expensive man on the job.

Very often a fixer is called to work on a loom which is throwing the shuttle out of the loom, and of course that causes the loom to stop, or slam off. However, the loom will not always slam off when this happens because sometimes the shuttle will be caught and wedged between the hopper stand and the box plates, or other parts of the loom, and lock the loom with the belt or friction still on. When this happens the shuttle is very often damaged beyond repair, and other parts broken or thrown out of adjustment. To correct this trouble proceed as follows—check the following things in the order named: (1) The shuttle, and other parts which might have been contacted by the flying shuttle. (2) Mat ups in the warp sheds, between the reed and the harness. (3) Shuttle boxes and the pickers. (4) Picker sticks and lug strap holders. (5) Parallels. (6) Parallel plugs and parallel springs. (7) Pick arms and pick shafts. (8) Stroke or sweep on picker sticks. . (9) Timing of the pick cam. (10) The reed. (11) Harness sheaves and springs. (12) Harness frames. (13) Harness setting and timing. (14) Tension on warp yarn. (15) Lay ends and back box plates. (16) Shuttle guards.

(1) The shuttle should always be examined carefully

after it has been thrown out of the loom, because it usually is bruised and splintered and would break out the warp yarn unless it was repaired. Also the parts which the shuttle is most likely to strike when it is thrown out should be checked to determine if they are broken or knocked out of adjustment.

(2) Sometimes broken warp threads, knots, gouts and falling lint will become entangled in the warp threads between the reed and harness (we refer to this as mat ups) and will trap the warp threads and prevent them from opening up when the sheds are raised and lowered and thereby block the passageway between the sheds through which the shuttle must pass, and will deflect the straight passage of the shuttle and cause it to be thrown out of the loom. I know, that in the minds of a great many readers, the question will arise here as to the wisdom of any further checking if it has been found that the shuttle was thrown out by trapped warp threads, or mat ups. Some will contend that it does not make sense. I contend that it does, for two reasons: first, everything which I suggest checking will cause the loom to run badly, if out of adjustment, and second, I am trying to impress on the reader's mind the real importance of doing preventive loom fixing. I know that some fixers will contend that they do not have the time to do all this checking and keep the flags down on their sections. The things which I suggest will require very little of the fixer's time, provided they do not need attention and some adjustments, and certainly the best time to make these adjustments is before they develop into bigger jobs, and possibly, breakdowns, which could put the loom out of production for hours and necessitate the use of costly supplies. I have watched it over a long period of years, and I have been thoroughly convinced that the loom fixers who do this preventive loom fixing will have very few looms flagged compared to the ones who do not and they will stay ahead of their jobs, and their jobs will produce efficiently and cheaply. But the real pay-off is that it all contributes to a good smooth running job, and this creates contentment and happiness for everyone involved.

(3) If the shuttle is not properly boxed it will sometimes be thrown out of the loom, because it will not be delivered from the box in such a way as to allow it to follow a straight course, the reed line, in its passage across to the opposite shuttle box. When the shuttle is boxing properly the shuttle knurl, or point, will be in contact with the picker when it comes to rest at the end of its journey across the lay. If the shuttle is bouncing or failing to go all the way up in the box the picker will have to travel a short distance before it comes in contact with the shuttle knurl, and this will cause the end of the shuttle to be deflected from the straight course it should follow and it will be thrown out of the loom. If the picker is loose on the stick, or not paralleled properly, it will cause the same thing to happen. If the box plates, both front and back, are loose or not in proper alignment this also will throw the shuttle out. (Improper boxing of the shuttle will cause many other troubles, not mentioned above, but will be covered later).

(4) A picker stick which has become warped or weakened by excessive wear, or partly broken, cracked or split, will throw the shuttle out because the picker will be thrown out of parallel on its forward delivery motion. If the lug holder which secures the lug strap in proper position on the picker stick is placed too low on the stick, or if it is broken allowing the lug strap to drop down on the parallel shoe, it will cause the loom to pick late, creating a harsh, heavy pick, and thereby causing the picker stick to warp, or bend, and this will raise the picker too high on its forward stroke and thereby throw the shuttle off its straight course across the lay. Each loom fixer should be furnished with a gauge to use when positioning the lug holder onto the picker stick. This gauge should determine the *minimum,* but not the maximum height from the bottom of the long lug to the heel bolt, please note, the *heel bolt,* and not the picker stick washer. Due to many existing conditions, such as width and model of loom, type of goods being woven, speed of loom, etc., the proper height of the lug will vary, but I think it is safe to say that a minimum height of eight inches from bolt to lug can be established on all looms, and of course the higher the better. If the loom will not run with the lug set at eight inches from the bolt, it is a sure indication that there is excessive lost motion or improper adjustments some place on the loom, and the loom should be checked all over thoroughly and completely overhauled if found necessary. If the loom is allowed to run with the lug strap lower than eight inches on the stick, there will be so much strain and backlash created on the different parts throughout the entire loom that a complete overhauling will be compulsory in order to maintain efficient operation.

(5) If the parallel or parallel shoe works loose or becomes excessively worn it will sometimes throw the shuttle out, because this will cause the picker to be thrown out of parallel line with the shuttle knurl on the pick. If either of the above-mentioned parts become excessively worn, it is impossible to parallel the picker properly. These parts always wear at the points where they contact each other when the picker stick is back in rest position, and the shuttle all the way up in the shuttle box.

(6) Excessive wear on the parallel plug will sometimes cause the shuttle to be thrown out, for two reasons: first, this reduces the power on the pick and too often the fixer will lower the lug strap to regain this lost power, and as already mentioned, this is bad loom fixing. Second, the parallel plug will always wear most on the front side, and this will cause the picker to be drawn or twisted towards the back box plate on the forward stroke of the picker stick, and this will throw the shuttle off the straight course it should follow. This pulling or twisting towards the back of the picker stick is caused by the stick's contact with the check strap on the forward stroke of the stick. The check strap is bolted on the back side of the lay, and all the sliding movement of the strap is on the front side of the lay, and when the stick contacts the strap on its forward stroke it is immediately pulled back against the inside wall of the picker stick slot in the lay. Too many loom fixers do not make allowance for this when putting on a new picker. The picker should always be lined with the point of the knurl with the picker stick held firmly against the back inside wall of the picker stick slot, because this is the position the picker is in when it breaks contact with the shuttle on the pick. If the parallel spring is too tight or too loose it can cause the shuttle to be thrown out of the loom. If it is too tight, the picker stick will be pulled all the way back to the end of the lay and thereby will pull the check out of the check strap, allowing the shuttle to bounce or rebound when it contacts the picker. If the spring is too loose, the stick and the picker will be allowed to rise up out of parallel line with the shuttle knurl on the forward stroke of the stick. The parallel spring should be adjusted to a point just tight

enough to hold the parallel tongue in contact with the parallel plug when the picker stick is in rest position at the end of the lay.

(7) If the pick arm works loose this will interfere with the timing and power on the pick and could throw the shuttle out of the loom, or cause it to be trapped between the warp sheds. Either one, or both of the pick shaft boxes loose will do the same thing. If the pick shaft boxes have slipped, backward or forward, allowing end play in the pick shaft, this can also cause the trouble mentioned above. While checking the pick shaft, the pick ball and the pick ball cover which are mounted on the shaft should also be checked. A loom should never be allowed to run with end play in the pick shaft. If this end play cannot be removed by adjustment of the pick shaft boxes, it is a sure indication that the shaft or the box, or boxes, has become excessively worn and the worn parts should be replaced.

(8) If the stroke or throw on the picker stick is too long it will cause the shuttle to be thrown out, because the picker will hold contact with the shuttle knurl too far past the point where the shuttle has been released by the binder and thereby throw the shuttle off its straight course. Too short a stroke on the stick will reduce the power on the pick and prevent proper operation of the loom. The stroke on the stick should be adjusted to a point where the shuttle will be drawn out of the box far enough to just clear contact with the back binder. The length of the stroke on the picker stick will vary on some different model looms.

(9) If the pick cam is timed either too late or too early it will cause the shuttle to be thrown out. If it is timed too late it will create a heavy, harsh pick, and this causes the picker stick to bend backwards on its forward stroke, and the picker will be out of parallel with the shuttle knurl when the knurl breaks contact with the picker on the forward stroke of the stick. If the cam is timed too early the shuttle will be delivered from the shuttle box, into the warp sheds, before the sheds are opened wide enough to receive it and admit free passage to the opposite box, and the shuttle will ride out over the top shed and be thrown out. The proper timing of the pick cam is one of the most vitally important settings on a loom, and too many loom fixers neglect the checking of this setting. The reader will note that when I suggest the checking of any part of the pick motion, I always mention the checking and setting of the pick cam last. That brings us back to first things first, which I mention so often. For instance, if a worn parallel plug is replaced with a new one, or if the stroke on the stick is changed, shortened or lengthened, the timing of the pick cam will be changed. The loom is designed to pick, or the shuttle begins leaving the box, when the lay is in a certain position, and that leaves no acceptable reason for compromise, it is either right or it is wrong, and if not right, the loom will not run at top efficiency.

(10) If the reed is loose it will cause the shuttle to be thrown out because the shuttle will strike it and be deflected from its straight course. Sometimes the bars on each end of the reed will become bent and project out, towards the front, and this also will deflect the shuttle. This happens very often when a new warp is tied onto the loom, and the party who ties in the warps should be trained to check the reed very carefully.

(11) If the harness sheaves are binding on the sheave studs, or if the harness springs are too slack, the top sheds will not be drawn all the way up and the shuttle will ride out over the slack warp threads and throw the shuttle out. The harness sheaves are neglected, as a rule, at most mills. They cannot be oiled in the ordinary way because the oil would drip down onto the warp yarn. The studs cannot be greased because the grease will work down between the sheaves and form a black, carbon-like substance, and this will also fall onto the warp yarn. If the studs are not lubricated in some way, they and also the sheaves, will wear out too fast, and they are expensive parts. But the biggest cost will be the trouble they will give, and the bad cloth made before the weaver or loom fixer detects the trouble and gets around to making the replacements. The most satisfactory system I have used on this is to have the loom cleaner remove the sheaves when the warp is out, and clean the sheave studs with an oily rag. If this is done every time while the warp is out, the sheaves and studs will last for years and give satisfactory service. The sheaves should also be cleaned while removed from the studs. This system will also eliminate some rust and oily stains from the cloth, as rust will accumulate on the studs as they wear unless they are cleaned and lubricated.

(12) The harness frames should be examined carefully because a broken harness rib hook will prevent the sheds from opening up properly and this will throw the shuttle out. Also if the rib holder hook on the outer ends of the frames becomes broken this will allow the rib to slip out too far and strike the sword, or the crank arm, and this will prevent the sheds from opening up. If the rib hooks are not spaced or divided properly the heddles will be pressed too close together, and this will crowd the warp threads and cause them to become slack and this will throw the shuttle out and also will make defective cloth.

(13) If the harnesses are not adjusted and timed properly the shuttle will be thrown out. To set the harness, proceed as follows: turn the crank arm to back center position, the sheds are open at this point; adjust the jack strap, connected to the harness which is down, to where the warp yarn on the down shed will just barely clear the shuttle race plate. Turn the crank shaft one revolution; this will put another harness in down position. Adjust it as above, and repeat this operation until all the harnesses have been adjusted. If the harness are not adjusted as mentioned the space between the sheds will not be sufficient to allow free passage of the shuttle, and this condition will cause the shuttle to be thrown out and will also cause excessive breakage of the warp threads. If the harness cams are timed either too early or too late the shuttle will be thrown out. If they are timed too early the sheds will close on and trap the shuttle before it reaches the opposite box. If timed too late, the shuttle will enter the opening between the sheds before they are wide enough to receive it, and the shuttle will ride out over the top shed. The proper timing of the harness depends on the type harness cams being used. Some mills use a slow changing cam, and some use a quick changing, and of course the lay will not be in the same position when the harness are level on the change on the quick cam as it would be on the slow cam. Regardless of the type cam being used, a safe rule to follow in timing the harness cams is to place the shuttle in the shipper handle end of the loom, and level the harness on the change, far enough back from the beat or fel of the cloth so that the harness will be wide open when the lay is on front center position. This setting

is not only safe in so far as keeping the shuttle in the loom, but is very desirable for several other reasons which will be discussed later in this series.

(14) The tension on the warp yarn will cause the shuttle to be thrown out. If it is too slack the yarn in the top shed will bag down and the shuttle will ride out over it. If it is too tight the shuttle will be trapped between the sheds before it reaches its destination.

(15) If the lay end and back box plates are out of line or loose it will cause the shuttle to be thrown out. If the lay end plates are too high or too low in relation to the shuttle race, the shuttle is liable to be thrown in most any direction except the right one. Keeping the back box plates in line with the reed is vitally important, for a number of reasons, but keeping the lay end plates in line with the shuttle race plate is absolutely necessary if efficient operation is to be obtained. Much more will be said about these two parts, because many troubles are derived from them.

(16) The shuttle guards should be kept tight and should never be bent. The purpose of the shuttle guard is to trap the shuttle when it is thrown out and guide it across to the opposite box, and not allow the shuttle to strike, and usually break, the temples, filling fork and other parts, and also prevent the shuttle from becoming damaged, usually beyond repair. The shuttle guards are mounted on the reed cap, and after long usage the steel guard will be pressed into the wood cap at each end, and this will draw the guard out of its original shape and it cannot function properly. I have found it a good policy to put a heavy flat washer between the guard and the reed cap. This will prevent the abovementioned trouble. *(To be continued.)*

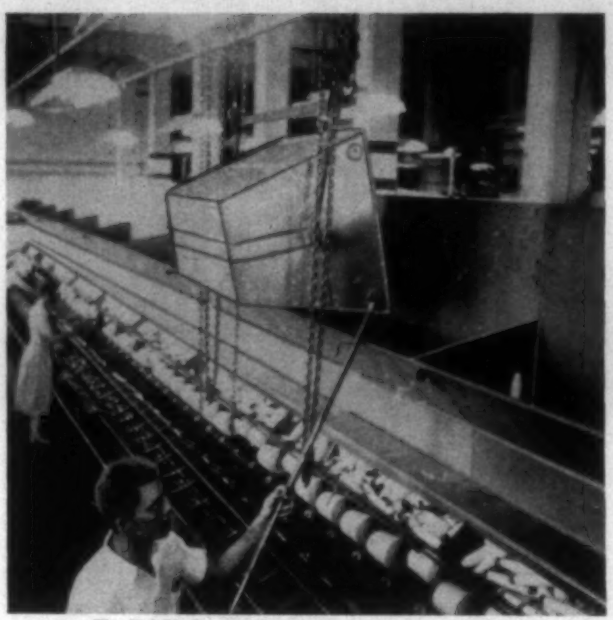
New Servicing Installation On Winders

An attachment for spooling and winding machines has been developed by P.O.M. Co., New York, for which U. S. Patent No. 2,536,510 has just been granted. This device can be attached to most of the standard Foster or Universal winders which are being creeled with spinning bobbins. Advantages of the invention are as follows:

(1) Prior to the development of this invention bobbins were brought to the winder in a truck. The tender had to position the bobbins by hand from the truck onto the shelf of the machine or into a hopper which is below the supply spindles and exposes bobbins to trash, loose ends, etc. This involved repeated bending of the operator. With the new application the bobbins are brought from the spinning room or from the conditioning machine in a bucket which runs on an overhead rail. The entire bucket can be emptied effortless into the hopper with one movement of the arm by tilting the bucket which is part of the invention.

(2) Previously, only a limited number of bobbins could be stored on the shelf or in the small hopper. Through the large overhead hopper, this invention provides for the storage of more bobbins which can be emptied into the hopper. In this way, sufficient storage for a full shift or even a full day is made available depending on the yarn count. Thus, yarn has to be delivered only once instead of several times per shift or per day.

(3) Previously, the spooler tender always took the bobbin highest on the board. The lowest lying bobbins were not used for long periods of time. These infrequently-used bobbins became dirty or dry. The new device provides a natural first-in first-out supply of bobbins.


The P.O.M. Co. attachment for spoolers and winders.

(4) The tender will always reach for a new bobbin from the same comfortable level, that is, the lower part of the hopper. Before, he had to reach on levels of various heights, according to the amount of bobbins stored, or he had to bend down.

(5) The spools or cones when finished are placed upon an endless belt conveyor and are transported to the cone hopper, container or inspection table. This can be done continuously or periodically as required and the cones can be inspected and/or wrapped simultaneously.

(6) Another conveyor system is provided to carry the empty bobbins back to the spinning room for repeated use.

(7) The same variety of yarn colors and counts as heretofore can be operated on the improved machine.

Future Sulzer Schedules Are Uncertain

Warner & Swasey Co., Cleveland, Ohio, is unsure of its future production schedules of its Sulzer weaving machine because of the importance to defense of the firm's machine tool capacity. C. J. Stilwell, president, last month stated: "Warner & Swasey is continuing a small assembly line on weaving machines to complete orders on hand, but because of the tremendous increase in machine tool demand we are entirely unable to increase this schedule." Mr. Stilwell revealed that batteries of about ten weaving machines are in place at Fulton Bag & Cotton Mills, Atlanta, Ga., on bagging and also are being run at Bachmann Uxbridge Worsted Co., Uxbridge, Mass., and at Cleveland (O.) Worsted Co.

At a Warner & Swasey open-house last month in Cleveland for 2,000 employees, six of the new weaving machines, two pin drafters and a Pacific converter were on display. The operating weaving units were run at a 240 pick-per-minute pace, according to one of the firm's engineers, while one unit was standing still, minus cloth and yarn, so that visitors could better inspect its parts. Production pace for the machine weaving a 12-ounce worsted sharkskin, 56 inches wide, was said to be 50 yards per eight hours. The machine on a 14-ounce worsted serge, 58 inches wide, was claimed to be producing 46 yards in eight hours. Another unit on 12-ounce worsted herringbone, 56 inches wide, was held to be clocked at 51 yards of cloth per eight hours.

Technical Service Offers New Knot Tying Machine

Development of an automatic warp tying machine for woolen and worsted looms is announced by Technical Service, Inc., Providence, R. I. The result of four years of research and experimentation, the attachment is designed to tie an English weaver's knot, considered by many as the finest currently in use to prevent slipping and untying. According to Technical Service officials, the new product runs on a rail and will tie warp threads on a loom of any width with only one set-up. It will tie any weight of yarn and can be adjusted to tie a fine thread to a coarse one. Its design, they report, allows the machine to be used as a movable unit or as a permanent part of a loom where thread runs out frequently.

Outstanding features of the machine, the company states, include: The attachment automatically aligns incoming and outgoing threads while in operation, it can tie any type of rayon from carpet yarns through worsteds and synthetics to cottons by simple adjustments; set-up time is reduced considerably over the time required by present machines for automatic knot tying on fine fabrics. The machine is a joint development of Technical Service, Inc., and a textile company. Patents will be held jointly and Technical Service will manufacture the machine.

U. S. Testing Co. Offers Advisory Service To Firms

A. L. Brassell, president of United States Testing Co., Inc., Hoboken, N. J., recently offered a new service to those textile manufacturers interested in contracts for the manufacture of fabrics required by the Department of Defense. Such fabrics as human parachute, nylon rip stop cargo chute, rayon aerial delivery, nylon rainwear, nylon oxford, and nylon cord of all types. Mr. Brassell states, "As a service to the textile industry, we have thrown wide the doors of the United States Testing Co. and made available our staff and technical and specification files to assist in the rapid mobilization of the textile industry, so vitally necessary to the defense of our country."

Gordon R. Turner, well-known to the industry as an expert in textile technology, will be in charge of the service and will be available as a consultant for assistance in the manufacture of fabrics to conform to government specifications. Mr. Turner served in a similar capacity in World War II; he was then called upon by many leading textile manufacturers because of his knowledge of specification requirements and his experience in assisting on bids.

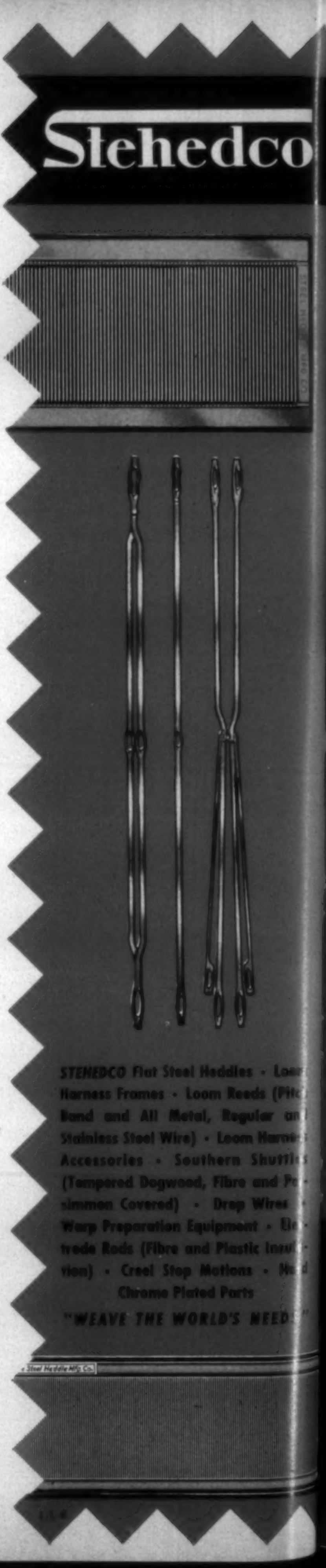
Complete files of government fabric specifications are available at the United States Testing Co. including the general specifications and specific specifications; such as, AN-C-127, 27 N 4, 16126, MIL-C-4072, JAN-C-508, MIL-C-5040 and many others. All are available to textile manufacturer's representatives for ready reference. The availability of such a complete specifications file of Army, Navy, Air Corps, Quartermaster and other specifications at one source is of great importance to the manufacturer seeking information quickly.

It was pointed out by Mr. Brassell that the advisory service is offered to all industry and that all were invited to the company's main laboratory at Hoboken, N. J., for a survey of the company's test facilities and specification library.

Armed Forces Announce Requirements For Bedding

Estimated requirements of the Army, Navy, and Air Force for bedding items were announced recently by the Department of Defense. The estimates are tentative, based on current planning information, are subject to modification, and do not include items which are currently being purchased. Announcement of requirements is being made to assist industry in planning production. Detailed information on individual procurement under this program will be released with the institution of each procurement action.

Cots for the Army and Air Force will be purchased by the Chicago Q.M. Depot, 1819 West Pershing Road, Chicago 9, Ill. Covers, mattresses, pillows, pillowcases, and sheets will be bought for the Army and Air Force by the New York Quartermaster Procurement Agency, 111 East 16th Street, New York 3, N. Y.; and for the Navy by the Navy Purchasing Office, also located at 111 East 16th Street, New York 3, N. Y. The Marine Corps is not announcing any additional requirements at this time.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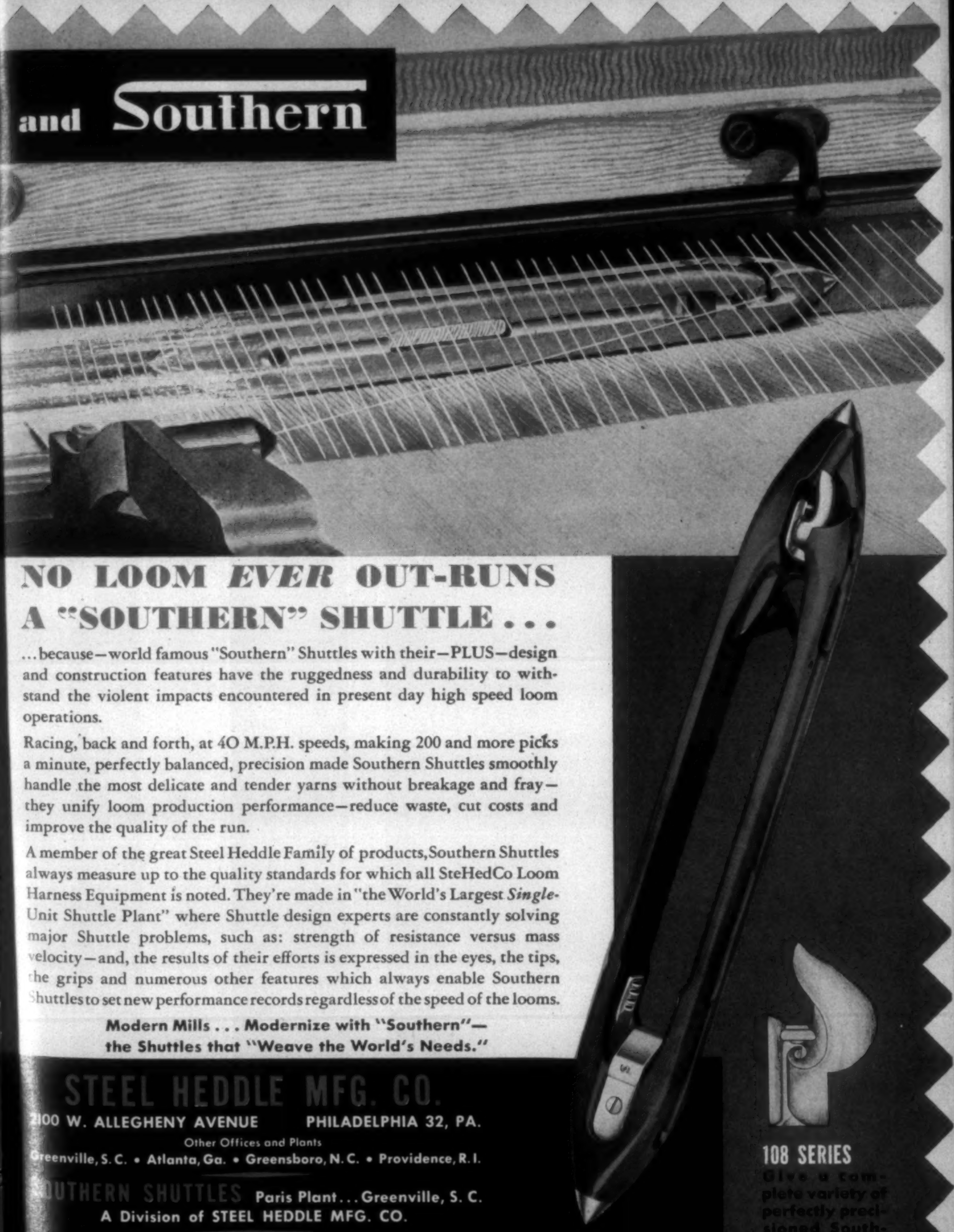

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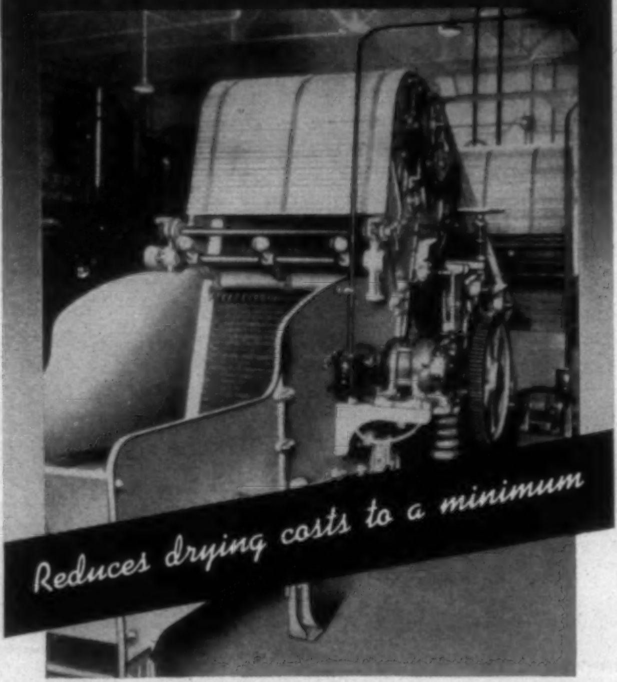

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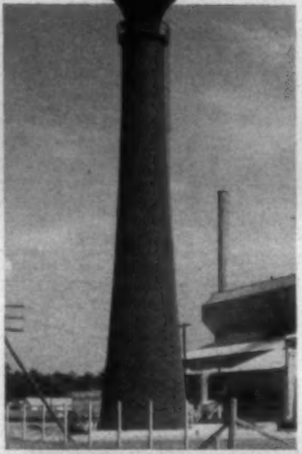

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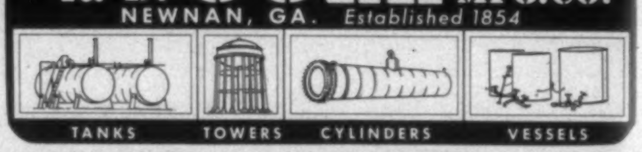

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Fundamentals Of Hot Air Drying

By LEO WALTER, Consulting Engineer

WHEN processing textile goods, drying of the fibers is often applied during manufacture, especially during finishing operations. Two methods are usually employed, namely, contact drying by which heated rotating cylinder surfaces or flat platen surfaces provide the heat input into the material to be dried; or by means of hot air drying, whereby air is the carrier for heat.

I will deal in this treatise with hot air drying in its forms of special interest for the practical textile engineer. There are many hot air dryers in operation in textile plants, the performance of which needs improvement. The following should build the basis for the progressive textile engineer to examine his hot air dryers from two angles, namely, regarding increased output and uniformity, of good, and also with due consideration for heat and fuel economy, i.e., thermal efficiency. Many a hot air dryer, tenter frame or carbonizer lends itself to improvements, and once the basic rules for dryer efficiency are applied to investigations, certain operational and/or constructional alterations should be easily applicable. A few additional measuring or controlling instruments might also be useful in locating inefficiencies, and will be an asset after improvements have been put into operation, because instruments will then help to maintain optimum conditions.

The action recommended to the ambitious textile plant engineer is therefore: (1) First, make a thorough survey of all hot air dryers in the mill. (2) Analyze the results of measurement by applying the fundamental rules for hot air drying. (3) Fit measuring instruments for temperature, humidity, speed, etc., where lack of one or the other essential figure of a process factor hampers you in ascertaining dryer efficiency. (4) Be not satisfied with a so-called "good" dryer output. It may easily be that too much heat and power is being used, and the same result could be achieved by using less fuel and/or electricity. (5) Be generous in allocation of money for reconstruction of dryers, even if at the beginning the expected savings cannot be guaranteed with full certainty. Intelligent reconstruction and instrumentation nearly always pays handsome dividends in form of better quality, improved output, better uniformity with less spoilage of goods. (6) After you have brought a textile dryer or tenter or carbonizer, etc., to top efficiency, apply automatic control. This will make you independent from the vagaries of "the human element," impersonated in plant operators. Once you have been successful, keep on top of it by installing those automatic control instruments which will ensure efficient operation all the time. (7) Where problems become too difficult for the works engineer, a specialized expert should be called in for investigations.

The writer before the war carried out many investigations in textile plants on the European Continent. After the war, surveys of textile dryers, mainly for wool drying, were made by engineers of the fuel economy section of the Australian Commonwealth Coal Commission, and some of the astonishing figures of their investigations, as summarized in Bulletin No. 7, will be quoted later. At the time of writing, the British Ministry of Fuel and Power, London, is carrying out a wide investigation of dryers, mainly from the fuel economy angle. Data are not available yet, but no doubt same will reveal similar inefficiencies as found by the writer in his consulting practice, and as published by the Australian investigators.

Drying Factors

In the following it is assumed that the reader has a basic knowledge of the physical and chemical properties of the commonly used textile fibers under normal conditions. Drying, however, puts the fibers under somewhat unusual conditions. When a textile fiber absorbs water it swells. Some of the water can be removed by mechanical means, such as squeezing rollers, or by centrifuging, etc. Ordinary cotton will retain water up to 50 per cent of its weight of water even after this mechanical removal of the excess. This "fixed" water seems to be very strongly attached to the particles of the cotton hair, this attachment being more in a chemical nature than just a physical condition. Under suitable applications of humidity and temperature stretched wool may acquire a length shorter than before. Generally speaking, wool steamed at 212° F. and stretched might retain permanently the length. Wool and human hair behave very similarly under application of heat and humidity and the permanent wave of hair differs little from behavior of wool fibers.

Without going into detail, the fact should be stated that the influence of hot air tends to alter the structure and finish of most textile fibers. Certain alterations are desirable, others are tolerable, and others cannot be allowed to take place. In general, the purpose of hot air drying of textile fibers will be to reduce moisture content without producing change of composition, color, or finish of the fibers.

The factors which deserve consideration in hot air drying are: (1) critical temperature of the textile material to be dried; (2) time allowed for achieving the desired dryness, or regain; (3) moisture content of the material entering and leaving a dryer, such as loose fibers, yarn or fabric; (4) dryer efficiency and cost of drying of a unit of material, at correct regain.

Fundamentals of Warm Air Drying of Textiles

The purpose of using heated air for drying textile material is to evaporate excess moisture, i.e., to transform the content of water of the goods into water vapor by means of heat input. Once the water is thus gasified and driven to the surface of the goods, it is being absorbed by the warm air, and carried away. It is well-known that the rate of drying depends, amongst other factors, on the way in which this driving out and evaporation of the moisture is performed. Variation of the rate of drying can be achieved by altering air temperature and/or its capacity for vapor absorption by varying air temperature, by applying less or more humid air, or by varying the air volume coming into contact with the textile fibers. Where moisture is loosely bound to natural or artificial fibers, comparatively less energy will be required for separation of the moisture from the fibrous solids, and for its evaporation and excerption. More heat energy is required, however, where the affinity of moisture to the solid particles is big, and where the nature of the textile material offers resistance against driving out the "inner" moisture towards the surface.

It is obvious that heat input into wet textile material is bound to vaporize the water. It evaporates first on the surface of the material, later more deeply within the mass of material, partly lodged in between the textile fibers, partly bound closer physically to each fiber. The driving force for getting inner moisture to the surface is a pressure potential between vapor pressure within the material and vapor pressure in the outer air. It may be convenient to imagine the small water particles between the solid textile fibers as boiling until the moisture is transformed into vapor. The latter has a higher vapor pressure than the always-present but invisible water vapor in the air, so that the inner vapor forces its way through the pores of the textile material to the surface and finally into the air.

Fig. 1 gives a general idea how this pressure potential works. The "boiling" inner moisture is driven out by means of its greater vapor pressure, which latter overcomes resistance against movement through the pores of the material. Where the path of moving the inner vapor is blocked, for example, by choked or closed capillaries of the material near the surface, the inner vaporized moisture cannot escape, and "case" or "surface" hardening results. This is usually caused by too sharp drying in the beginning, whereby the surface moisture is rapidly carried away by the hot air, while the pores of the material contract, and thus block the escape of the inner vaporized moisture. It is well known that surface moisture is easier to remove than inherent "hygroscopic" moisture. Another incident to be avoided is shrinkage of fabrics caused by too sharp drying, which should not go below the "natural" moisture content. To dry below the latter would be futile, because an overdried fabric would quickly reabsorb moisture after leaving a dryer, until it contains its minimum of moisture under atmospheric conditions (regain). I have repeatedly mentioned "resistance" to driving out vaporized moisture from the inner parts of material. It should be borne in mind that layers of films are present at or near the surface of the goods, through which the moving vapors have to penetrate in order to come into the outer stream of hot air, which absorbs them and carries them away. These stagnant films can be water, or air, or water vapor, or a mixture of all three.

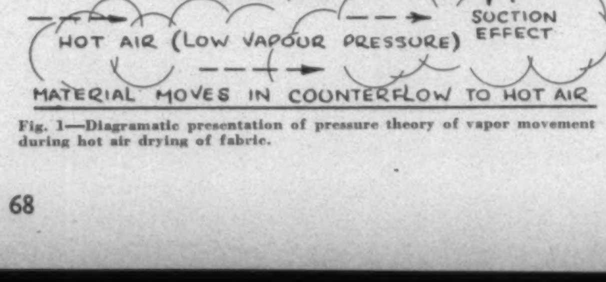
HOT AIR FOR DRYING (AIR + VAPOUR)
LOW VAPOUR PRESSURE
SUCTION EFFECT
MATERIAL WITH HIGH VAPOUR PRESSURE DUE TO EVAPORATION
CONVEYOR
SUCTION EFFECT
HOT AIR (LOW VAPOUR PRESSURE)
MATERIAL MOVES IN COUNTERFLOW TO HOT AIR

Fig. 1—Diagramatic presentation of pressure theory of vapor movement during hot air drying of fabric.

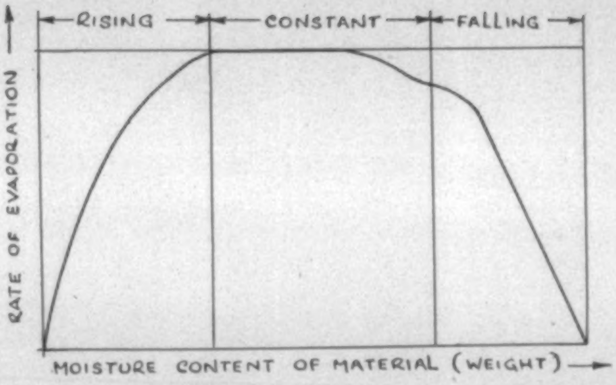

Fig. 2—Curve showing evaporation of moisture and weight of material during main stages of drying.

Periods of Drying

In a drying cycle, the following periods can be distinguished, for example, when filling wet loose wool material in trays of a batch dryer and blowing warm air through: (1) The rising rate of drying, whereby evaporation of moisture increases with heat input; (2) the constant rate of drying, whereby evaporation goes on for some time fairly steadily; and (3) the falling rate of drying, whereby the amount of moisture driven out drops in spite of continuous rate of heat input. Fig. 2 shows a time-temperature drying curve, which later varies, however, according to the nature of the goods. The art of hot air drying is to find out the most advantageous method of drying for each textile material, and to perform it at best advantage for each batch, or continuously in continuous drying. I will now deal with the four main drying factors from the practical point of view, which are achievement of correct drying of the textile material at the right rate, at the minimum of time, and with as little cost and labor as possible.

Critical Drying Temperature

It is well known that the textile materials have critical drying temperatures, which must not be overstepped, unless damage would be done to the finish of the dried textile material, or to its structure. The hot air temperature to be used has obviously to be higher than the critical drying temperature of the textile goods, mainly for providing the latent heat of evaporation to the moisture content of the material, and for heating up the latter, which then cools down the air to the critical point. During the starting load of a drying apparatus, i.e., during warming up of the textile fibers from cold, heat is also extracted from the incoming hot air to warm up the housing of the dryer, the metal of

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heating coils, etc., and the entering hot air has, therefore, to be hot enough. It is not intended here to deal with actual figures of critical drying temperatures of the various textile materials, which can be found in textbooks or in the literature in general. What should be emphasized, however, is the fact that often actual drying temperatures are encountered, when surveying textile drying apparatus in practical use, which temperatures are not those envisaged by the designer of the dryer, and are not the most advantageous temperatures at all. To find out the correct inlet temperature of air is, therefore, job number one.

In practical use of drying apparatus, sometimes incidents occur which might warrant reduction of drying temperature as a temporary measure, but this lowered drying temperature remains then as standard without real justification. Much prejudice has thus slipped into textile dryer operation, which reduces drying efficiency and output unnecessarily. For example, where a batch of textile goods has been spoiled due to overheating caused by exceptionally dry fed materials, many a plant operator afterwards reduces drying temperature considerably, simply to increase the safety margin between operating and critical hot air temperature. What the operator does not realize is that all the following batches might have normal moisture content, and could be dried again at a higher air temperature and at faster rate. The use of automatic air temperature control enables reduction of this safety margin between air inlet temperature and critical fiber temperature with consequent greater output, and correct or uniform drying at near or near critical temperature. Any investigation of an existing hot air dryer should, therefore, make sure that the actual drying temperature is not too far away from the critical temperature, but will never reach it.

Drying Time

Modern textile dryers use larger hot air velocities and utilize the highest allowable air temperatures for rapid drying. Older dryer types, however, often allow a longer drying time, using a rate of drying (moisture evaporation) which is below the limit which is desirable, with consequent moderate output. Where a textile engineer suspects an unduly prolonged drying time, he should call in a specialist with a view to putting modifications to the dryer in hand, which reconstruction often results in very much improved output. The instances are deplorable where a bigger dryer output is sometimes badly required, but where nothing is being done about it, although dryer tests can be obtained from consulting engineers, or from the makers of the dryer. Very often the time of drying can be considerably reduced by small alterations in the drying plant, such as improved steam trapping and air venting of steam heating coils (Fig. 2a). Many an old hot air textile dryer can be operated more efficiently by improving distribution of hot air by means of baffling, or by increasing hot air temperature to its upper limit, at the same time using automatic temperature control for preventing excess temperatures. While air temperature usually receives consideration in practical operation of dryers, observation of humidity of air is frequently neglected, although the relative humidity of air used for drying is the important factor for achieving correct rate of drying, and for drying time. Whether textiles are dried loose, in hank or cheese form, on the beam or as piece goods, air humidity must be closely controlled.

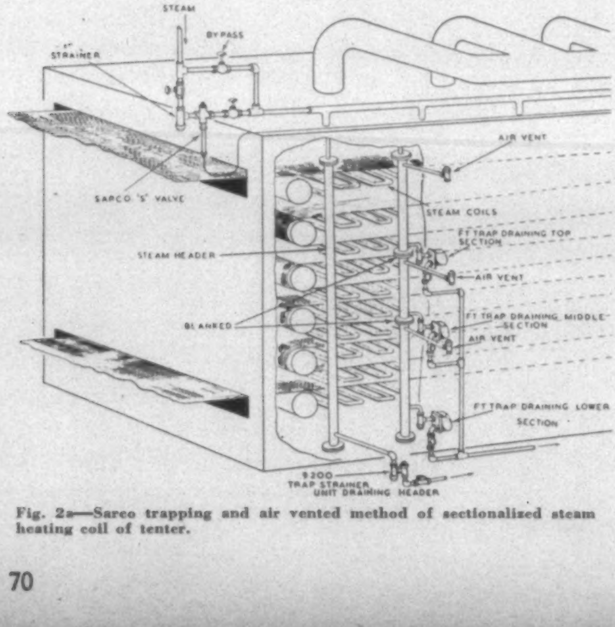

Fig. 2a—Sarco trapping and air vented method of sectionalized steam heating coil of tenter.

Air Humidity and Drying of Fibers

Before dealing with humidity problems in warm air drying of textiles, a few basic facts about hygrometry and humidity control should be given. Absolute humidity of air is the total amount of water vapor present in a given air volume, and can be expressed in grains per cbc./ft., or in grams per cubic meter. Relative humidity is the proportion of the moisture content in air at a given temperature to the maximum possible amount of moisture (vapor, which air at this temperature could absorb when saturated). Relative humidity is then the ratio

$$\text{R. H.} = \frac{\text{Absolute humidity}}{\text{Humidity at saturation point}}$$

and is usually expressed as a percentage. Warm air having 70 per cent R. H. at a certain temperature can thus absorb a further 30 per cent of water vapor to become saturated at this temperature. If the air is reheated, its relative

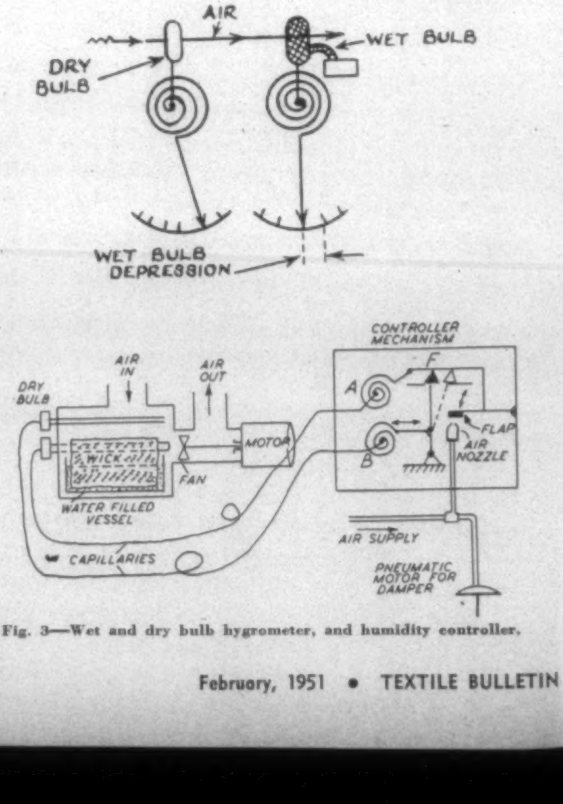

Fig. 3—Wet and dry bulb hygrometer, and humidity controller.

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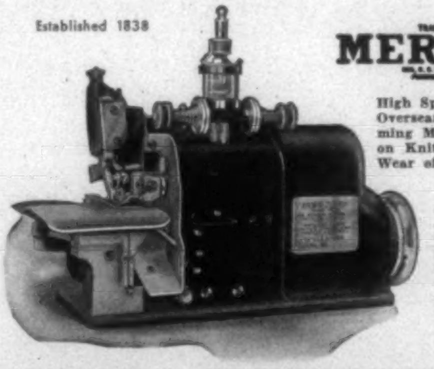

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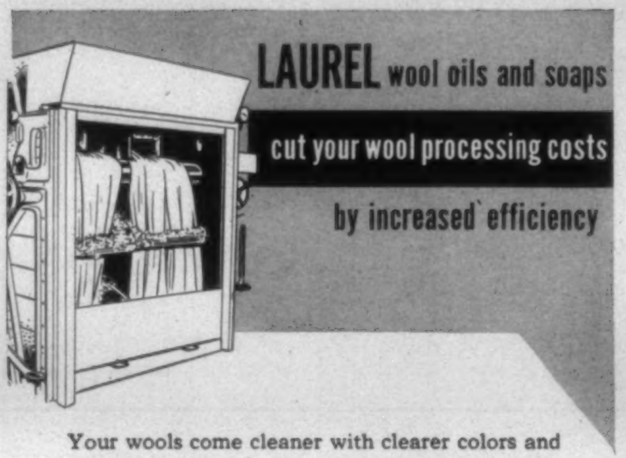

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humidity at the higher temperature will become less, and its capacity for water absorption will increase. This fact is utilized in modern textile dryers using reheated recirculated air.

The aim of efficient drying is to produce such air temperature and humidity conditions during the drying process as to achieve the desirable rate of drying, allowed by the qualities of the textile material to be dried. Sharp drying requires high air temperatures combined with low relative humidity, but gentle drying allows only application of moderate temperatures and recommends moderate or higher relative humidity. Additional to these factors is the air volume used and its velocity and distribution within a textile dryer. Higher air speeds (up to a certain point) enable the hot air to pick up more vapor emanating from the textile material, and the direction at which hot air is blown over or through the goods to be dried also influences the rate of removal of the evaporated moisture.

Hygrometry

Hygrometry is the use of measuring instruments for determination of moisture of air. For warm air drying of textile goods the ordinary types of hygrometers used under ordinary low air temperatures cannot be applied. The wet and dry bulb hygrometer, which is applicable between 0° to 100° C. (32° to 212° F.) air temperature is shown in Fig. 3, and is available in various industrial types. The wet and dry bulb method of measuring humidity of air works as follows: One thermometer bulb measures room temperature (dry bulb temperature), the second bulb is moistened by means of a wet wick or the like, and due to constant evaporation of water its temperature reading will be lower. This "wet bulb depression" or "psychrometric difference" of both temperature readings is proportional to the prevailing air humidity, and is a direct measure of relative humidity of the air at the dry bulb temperature (dryer temperature). Electrical hygrometers are also available, based on resistance thermometers for measuring the psychrometric difference as shown diagrammatically in Fig. 3a.

Other types of humidity meters of air are based on change of electrical resistance with varying air humidity. There are also available multi-point hygrometers for measuring various air humidities on a single instrument scale by means of a selector switch, which can be used for measuring air humidity in various zones of textile dryers. *(To be continued.)*

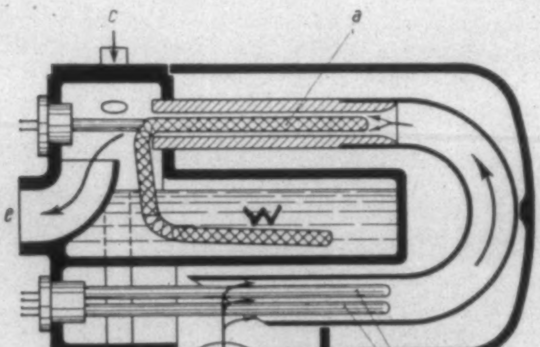

Fig. 3a—Sectional diagram of typical electrical humidity meter, using wet and dry resistance thermometer bulbs: (a) wet bulb resistance thermometer; (b) dry bulb resistance thermometer; (c) water inlet to wick of wet bulb; (d) water outlet; (e) air outlet from meter case; (f) air inlet from drying space (fan blowing in is not shown); (w) wick, immersed in water.

Wash-Fastness Test For Fabrics Ready

Technicians in attendance last month at the research committee meeting of the American Association of Textile Chemists & Colorists predicted that the new standard small-scale test for wash-fastness will soon be in widespread use. The test determines how fabrics stand up under the equivalent of five trips to a commercial laundry.

Charles Sylvester, chairman of the wash-fastness committee of the association, reported that new accessories for the wash-fastness test are available for use in the Launderometer. Atlas Electric Devices Co. of Chicago, producer of the device, has designed Inconel tubes to replace the glass jars formerly used in washability tests. The tubes placed on the rotating axis of the Launderometer provide a space for about eight inches of fabric samples to get the full effect of detergent solutions and bleaches used in commercial launderies.

The research committee voted on a tentative method for testing colored fabrics for fastness to water, which after a year's trial may be adopted as a standard test. In reporting on the test, Matthew Babey, chairman of the color-fastness committee, said that it included tests in plain water, sea water and chlorinated swimming pool water.

C. Norries Rabold of Cooleemee, N. C., was re-elected president of the association, according to the results of a mail ballot just tabulated. J. Robert Bonnar of New York was elected a vice-president. George O. Linberg of Boston was re-elected a vice-president; William Moorehouse, Boston, treasurer, and Dr. H. Hapin, Lowell, Mass., secretary.

Data On Rubberized Textiles Available

The current issue of *Rubber Developments,* a quarterly devoted to advances in rubber, describes a two-day forum which was devoted mainly to discussion of the uses of rubber in combination with textiles. The course was held in England under the auspices of Rubber Technical Developments, a joint unit of the British Rubber Producer's Association and the British Rubber Development Board.

The article gives a brief description of the course and describes some of the subject matter. It notes that among the subjects discussed were various methods of using latex in conjunction with different types of fabric. The techniques involved in impregnating, spreading, calendering and doubling were all explained. Uses of latex for carpet backing, carpet underlay, treatment of gas-impermeable fabrics and the manufacture of artificial silk were also covered. In addition there was a good deal of discussion on the subject of Positex, a combination of wool and rubber that increases the adhesion between fibers in wool textiles.

A full description of this course and the subject matter covered may be obtained without charge by writing the Natural Rubber Bureau, 1631 K Street, N. W., Washington, D. C., Dept. 1.

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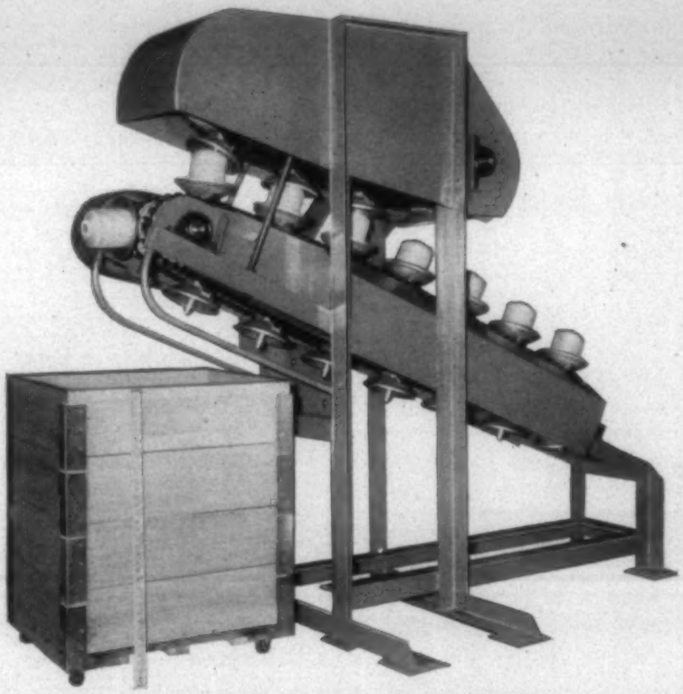

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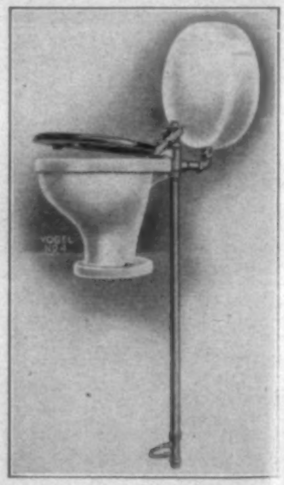

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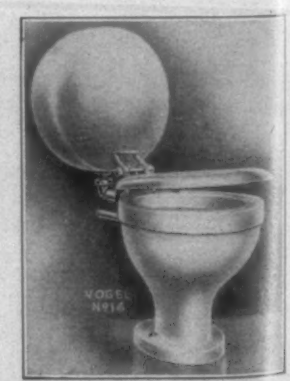

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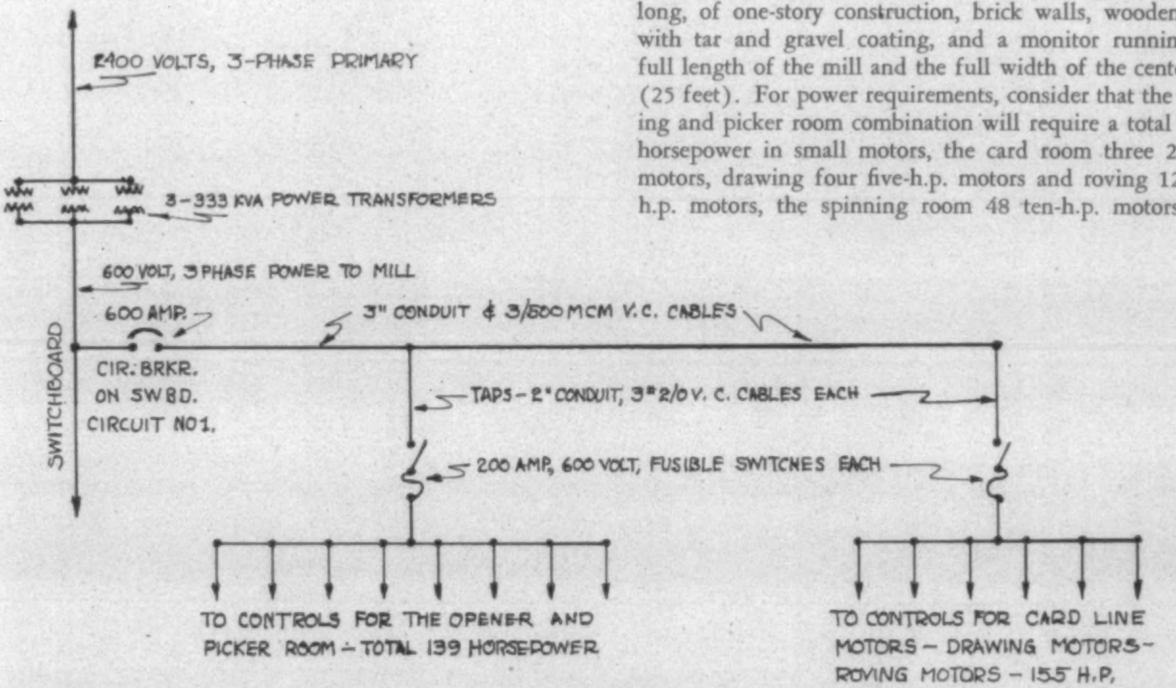
Let's Wire A Mill For Power

By JAMES T. MEADOR

QUITE some time ago we featured in TEXTILE BULLETIN some sections of the National Electric Code applying to power and light wiring in textile mills for the benefit of those of you who are concerned with such problems, and who are prepared to do such work from the manpower point of view. At that time we did not have a specific example of the use or application of the code to such work, but herewith we are presenting a problem of power wiring for your consideration.

Let us take a typical mill building, approximately 75 feet wide (three bays of 25 feet each) and 53 eight-foot bays long, of one-story construction, brick walls, wooden roof with tar and gravel coating, and a monitor running the full length of the mill and the full width of the center bay (25 feet). For power requirements, consider that the opening and picker room combination will require a total of 85 horsepower in small motors, the card room three 25-h.p. motors, drawing four five-h.p. motors and roving 12 five-h.p. motors, the spinning room 48 ten-h.p. motors, and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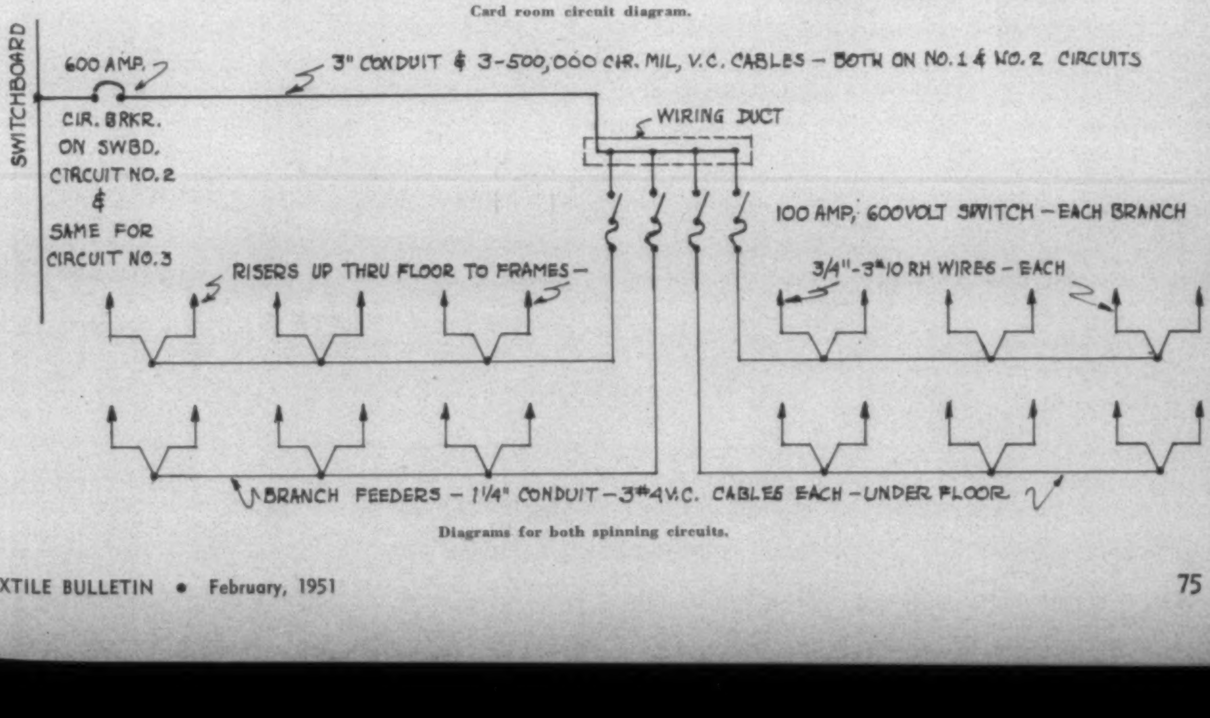
TAPS - 2" CONDUIT, 3 #2/0 V. C. CABLES EACH
200 AMP, 600 VOLT, FUSIBLE SWITCHES EACH
TO CONTROLS FOR THE OPENER AND PICKER ROOM - TOTAL 139 HORSEPOWER
TO CONTROLS FOR CARD LINE MOTORS - DRAWING MOTORS - ROVING MOTORS - 155 H.P.

Card room circuit diagram.


SWITCHBOARD
600 AMP.
3" CONDUIT & 3-500,000 CIR. MIL, V.C. CABLES - BOTH ON NO. 1 & NO. 2 CIRCUITS
WIRING DUCT
CIR. BRKR. ON SWBD. CIRCUIT NO. 2 & SAME FOR CIRCUIT NO. 3
100 AMP, 600 VOLT SWITCH - EACH BRANCH
RISERS UP THRU FLOOR TO FRAMES
3/4"-3 #10 RH WIRES - EACH
BRANCH FEEDERS - 1 1/4" CONDUIT - 3 #4 V.C. CABLES EACH - UNDER FLOOR

Diagrams for both spinning circuits.

spooler and warper 30 horsepower together. These power requirements, tabulated, look like this:

OPENING AND PICKER ROOM

8	2	h.p. motors, blending hoppers	16 h.p.
2	2	" motors, waste hoppers	4 "
2	3	" motors, feed tables	6 "
1	5	" motor, lattice opener	5 "
2	10	" motors, fans	20 "
1	3	" motor, condenser	3 "
4	5	" motors, pickers	20 "
2	7½	" motors, pickers	15 "
1	10	" motor, waste machine	10 "
1	40	" motor, vacuum stripper	40 "
Total opening and picker room			139 "

CARD ROOM

3	25	h.p. motors, card lines	75 h.p.
4	5	" motors, drawing	20 "
12	5	" motors, roving	60 "
Total for card room			155 "

SPINNING ROOM

50	10	h.p. motors, spinning	500 h.p.
2	7½	" motors, warpers	15 "
3	5	" motors, spooler and misc.	15 "
Total for spinning room			530 "

Now, when we combine the opening and picker room load with that of the card room, we have a total load of 139 horsepower plus 155 horsepower or a total of 294 horsepower, which we can consider as being suitable for one circuit (we'll figure the wire size later). Next, take the total of the spinning room load of 530 horsepower into consideration, and we find that this is too much to carry economically on one circuit, so we divide this by two and we get 265 horsepower more or less equally divided on two circuits of the same size.

There is another factor involved in this problem which we have not yet disclosed, and that is the fact that the switchboard is located at the very end of the building, outside of the opening and picker room, which makes for long feeder circuits from the circuit breakers to the destinations of the circuits, especially the two spinning room circuits.

Therefore, in view of these facts, we can safely decide upon the use of 500,000 cir. mil cable in each of these three circuits, with a rating of 405 amperes per cable in varnished cambric insulation (if you are lucky enough to find it), or a rating of 380 amperes in RH (likewise, if you can find it), or even a rating of 320 amperes in regular Type R insulation. These circuits, of course, take three-inch conduit. So much for the main feeders. Now for the taps.

To get to an understandable basis for this problem as a whole, and this part in particular, let's look over the circuit diagrams, and later on the wiring layout, which is the safest and most satisfactory way of arriving at your circuit requirements and the necessary specifications to meet these requirements, and by this method of procedure you can design and plan your circuits in such a manner as to do just exactly what you want done. So, take the diagram of circuit No. 1, the card room circuit. We see that it starts at the circuit breaker on the switchboard and feeds the card room with three-inch conduit and 3/500,000 cir. mil varnished cambric cables, and since we started talking about the taps from this feeder circuit, let's go to the first tap on the line, which is for the opening and picker room, and which we see by the table we made up requires capacity for 139 connected horsepower, mostly in small motors except for the 40-h.p. motor on the vacuum stripper. Now, in arriving at the current-carrying capacity of the feeder-tap for supplying this particular group of motors, let's refer to Section 4314 of the code, which states that—*conductors supplying several motors* "shall have a current carrying capacity of not less than 125 per cent of the full load current rating of the largest motor in the group *plus the sum* of the full load current ratings of the remainder of the motors in the group," which when applied to our particular problem means that on 550-volt power:

125% × 40 amps (40 h.p. motor) = 50 amperes
Remainder of power (139 minus 40) = 99 amperes
Total amperes for calculation = 149 amperes,

which, by referring to Table No. 1 of the Code, would permit you to use either No. 1/0 RH or No. 1/0 varnished cambric cable, both of which would require two-inch conduit.

The next jump is to work out the fusible disconnect switch for this tap circuit, and in this connection we fall back on the code, Section No. 4343-B-3, which states that for several motors on one branch circuit, "the branch circuit must be protected by fuses having a rating equal to that specified in Section No. 4342 (meaning 200 per cent of the 40-h.p. full load rating in this case) for the largest motor in the group, plus the sum of the full load current ratings of the remainder of the motors in the group," which also applied to our particular problem in the same manner as the case of the wire size calculations above, comes out this way:

200% × 40 amps (40-h.p. motor) = 80 amperes
Remainder of power 99 h.p. = 99 amperes
Total for switch calculations = 170 amperes,

which means that a 200-ampere switch, while close to this figure, will be the rating of switch to use. If you will use one-time, powder-packed fuses, or even heavy super-lag fuses, you should get a *cool* operating switch. And this completes the business of the tap-circuit for the *opening and picker room.*

Our next consideration is the tap-circuit for the card room power which, when we refer back to our tabulation for this area, we find totalled 155 horsepower, composed of several small motors (16 5-h.p. and three 25-h.p). So, in following exactly the same method of procedure as above for determination of wire size, we come out with No. 2/0 RH cable or No. 2/0 varnished cambric cable, both of which will require two-inch conduit. By the method of calculation of the fuse rating required for this branch circuit, same as that used above, we find that 200-ampere fuses are called for, and therefore a 200-ampere switch will do the job. Here, too, the one-time or heavy super-lag fuses will give you cooler operating temperatures, all of which completes the business of the *card room* tap circuit and also of the No. 1 feeder circuit.

Next up for consideration are feeder circuits two and three from the switchboard circuit breakers to the spinning room branches. From the diagram you'll notice that a cir-

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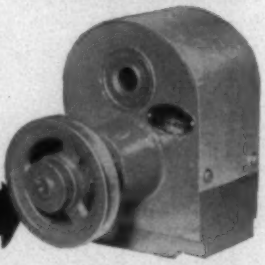

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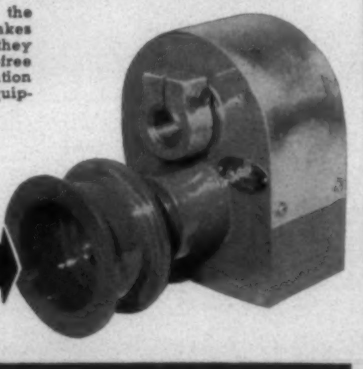

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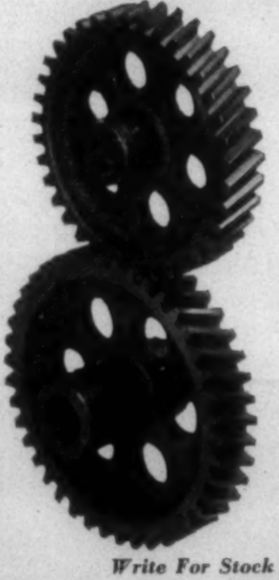

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cuit of 3/500,000 cir. mil varnished cambric cables in three-inch conduit run from the circuit breakers to the branch circuit switches in the spinning room, which are grouped, four switches together, on a wiring duct, on a brick pilaster. These switches are 100-ampere, 600-volt, three-pole, single throw, fusible, and enclosed (Type "C" or "A," as you please) same as the 200-ampere switches used in the card room and mentioned above. From each switch there runs a branch feeder circuit of three No. 4 RH or varnished cambric cables in 1¼-inch conduit, to supply six ten-h.p., individual spinning motors, from which is tapped a circuit rising up to each spinning frame starter on the floor above (all of this wiring is under the floor) consisting of three No. 10 varnished cambric wires in three-fourths-inch conduit, which brings up a point that makes such insurance men pull their hair, and that is the subject of correct tap size relations. In this case, a smaller tap circuit could have been used, as the motors were only ten horsepower, which would have only required three No. 12 wires in half-inch conduit, but the code states in Section No. 4348: "If the location of the tap to the feeder conductors is not accessible, the motor branch fuses may be placed where it will be accessible, provided the conductors between the tap and the fuses either have the same current carrying capacity as the feeder, or, provided they have a current-carrying of at least one-third of that of the feeder, and are not more than 25 feet long and are protected from mechanical injury."

Pamphlet Lists Power Truck Rules

Elwell-Parker Electric Co., Cleveland, Ohio, manufacturer of power industrial trucks, recently distributed to its customers a pamphlet listing 34 rules for the safe operation of power industrial trucks. These rules are: (1) Move control levers firmly from one speed to another and without hesitation. (2) Keep your load as low as possible when moving. (3) Keep your truck behind the load. (4) Avoid making quick or jerky stops. (5) If your truck has a tilting device—use it. (6) Go easy when approaching danger points. (7) Take a good look at your load before you pick it up; if you have to move a doubtful load, slow down. (8) Be sure to pick up every load squarely. (9) Report rubbish on floors to your foreman. (10) Don't cut corners. (11) Keep your truck clean. (12) Don't carry passengers. (13) Don't allow others to operate your truck. (14) Report need for repairs immediately. (15) Report materials or obstructions left in aisles. (16) Observe traffic rules. (17) Do not drive with wet or greasy hands. (18) Slow down before opening doors by remote control. (19) Watch low clearance signals. (20) Observe fire prevention rules. (21) Avoid sudden stops, starts and changes in pace when transporting bulk materials. (22) Approach swinging doors squarely, and in the center. (23) Use your horn, don't abuse it. (24) Keep in the clear. (25) Park safely. (26) Look before you start. (27) Report every collision to your foreman. (28) Avoid crowds. (29) Allow no fooling around your truck. (30) Handle hoists carefully. (31) Never haul inflammable liquids or acids except in approved containers. (32) Don't drive in the dark. (33) Dress safely. (34) On elevators shut off power and set brakes.

A.S.T.M. Technical Committee D-22 Organized

A new technical committee which is to concentrate its work on the formulation of methods of atmospheric sampling and analysis, the selection of acceptable nomenclature and definitions and the stimulation of research to accomplish the foregoing purposes, held its organization meeting at the headquarters of the American Society for Testing Materials in January. Dr. L. C. McCabe, chief, air and stream pollution, U. S. Bureau of Mines, who had been designated temporary chairman of the new committee which has the designation D-22, presided.

Fork Trucks And Tractors Cut Textile Plant Handling Costs

By S. R. BROOKSHIRE, Materials Handling Engineer

A materials handling system based on fork trucks, tractor trucks and trailers has proved an effective time-and-labor saver in Cone Mills Corp. plants at Greensboro and Pineville, N. C. Cone Mills manufactures denim, the multipurpose cloth, beginning with raw cotton and processing essentials, most of which are transported and stored at various stages by means of this equipment.

Fork trucks have made a substantial reduction in the time-factor handling of cotton bales and have doubled and tripled available warehouse area for storage purposes. Small tractors tow trailer-trains loaded with tons of cotton. All of this equipment is battery-powered for economy, safety and cleanliness.

The system is the most practical where large quantities of goods must be kept on hand in numerous warehouses and made quickly available for production in the mills. It is being extended in the warehouses and mills of a well-established enterprise now operating 14,500 looms.

Processing substances including dyes, bleaches, tallows and oils are handled in barrels and drums, some of which weigh, with contents, 500 pounds. These are palletized in loads weighing 2,000 pounds or more and are stacked three or four high. Formerly in handling them manually one tier was the practical limit for the heaviest barrels, two for the lighter.

Bales of cotton now are stacked five and six-high where three were maximum for muscle-straining hand-stacking. Bales of new cotton weigh 500 pounds; cotton waste 650 pounds. Hard labor and time lost would be the price of handling these by other than mechanical equipment.

In this and all other occupations in mills and warehouses most of the strenuous labor has been eliminated, yet total over-all employment has increased—not an unusual occurrence where more power is used to expedite and economize in cost of production. It follows the principle of best industrial procedure.

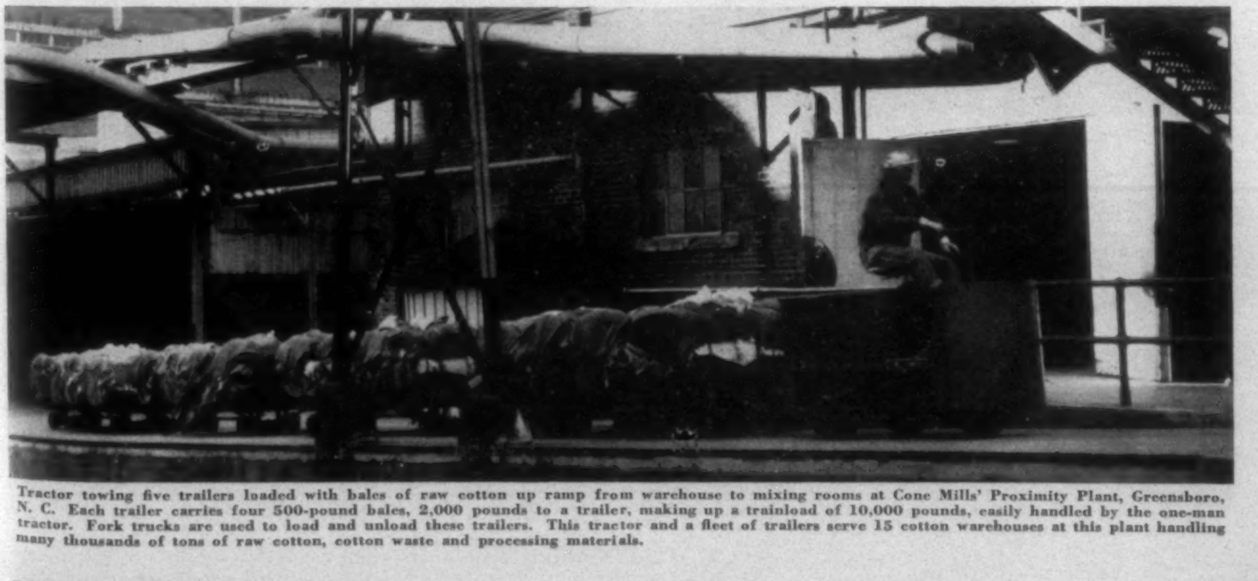
Four Elwell-Parker fork trucks and an equal number of Elwell-Parker tractors at Cone Mills do the general load-handling. From the time materials are received, unloaded, stored, removed from storage and processed they are of necessity handled a number of times, regardless of how compact unit loads may be made by palletizing. Quantities, tonnages and bulk impose problems even in the most direct type of handling. Power trucks are the best solution, especially where distances must be covered in intra-plant haulage.

In a typical instance, one fork truck at one plant is known to take care of 80,000 bales of cotton—more than 4,000,000 pounds—annually; besides the required amounts of processing materials. In addition to this, the truck is used to handle units of mill equipment and other machinery needing replacement, repair or servicing. The owners speak of the trucks as "handy" and "easily maneuvered."

Of far-reaching importance to producers and consumers of such goods is the fact that handling costs have been reduced to a fraction of a cent per ton, and time-factors now are reckoned in minutes instead of hours.

Fork truck tiering 500-pound bales of raw cotton five and six high at Cone Mills' Pineville, N. C., plant. Formerly three tiers were practical limit for labor when job was done manually. An interesting sidelight is the fact that while power trucks have doubled and tripled the availability of warehouse storage space more warehouses have been built recently to accommodate increased storage requirements.

Palletized loads of tallow in barrels tiered three high in the Cone Mills Proximity Plant, Greensboro. Each palletized load weighs 2,000 pounds. Formerly these barrels were stored one at a time in one tier and it required much more time and hard labor to do the job than it does now for the truck operator to lay up three tiers. This truck also transports and tiers palletized loads of processing materials. In all these operations savings in time multiply; "good housekeeping" and modern methods characterize these plants.


Tractor towing five trailers loaded with bales of raw cotton up ramp from warehouse to mixing rooms at Cone Mills' Proximity Plant, Greensboro, N. C. Each trailer carries four 500-pound bales, 2,000 pounds to a trailer, making up a trainload of 10,000 pounds, easily handled by the one-man tractor. Fork trucks are used to load and unload these trailers. This tractor and a fleet of trailers serve 15 cotton warehouses at this plant handling many thousands of tons of raw cotton, cotton waste and processing materials.

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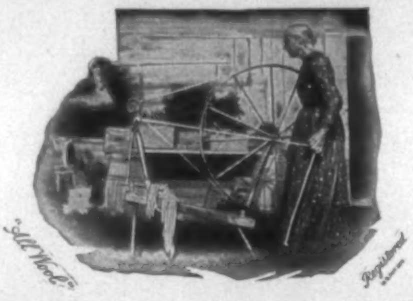

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Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

A. Lee McArthur, III, formerly a staff chemist with General Dyestuff Corp., has been named head chemist at the Cramerton (N. C.) Division of Burlington Mills Corp. Mr. McArthur is a native of Cordele, Ga., and a graduate of Duke University, Durham, N. C. . . . W. C. Morrison, general weave room overseer at the Bristol, Va., weaving plant of Burlington Mills, recently completed 15 years of continuous service with the firm. . . . Richard Powell has joined Bur-Mil as plant manager of the concern's new development plant recently completed at Greensboro, N. C. A native of England, Mr. Powell comes to Bur-Mil from Peterborough, N. H., where he has been plant manager of the Verney Corp., textile finishing plant.

Paul F. Haddock, formerly with American Cyanamid Co., has joined Sandoz Chemical Works, Inc., and will serve as supervisor of sales of chemicals and textile aids for the Sandoz office in Charlotte, N. C. Mr. Haddock represented American Cyanamid in the South for 13 years and served four years during the war both in this country and in India. He is a native of Charlotte.

M. A. Parrish resigned Feb. 15 as industrial relations director for Firestone Textiles, Inc., Gastonia, N. C., to become director of industrial relations and personnel for A. M. Smyre Mfg. Co., also of Gastonia. Mr. Parrish taught school in Belmont and Gastonia for 14 years before joining Firestone in 1944. . . . T. B. Ipock, Jr., safety director at Firestone since 1946, has been named to succeed Mr. Parrish as industrial relations director. A native of Old Fort, N. C., and a graduate of Wake Forest College, Mr. Ipock joined Firestone in 1943 as recreation director.

Dr. Gilman S. Hooper has been appointed assistant manager of high polymer research for Industrial Rayon Corp., Cleveland, Ohio. Dr. Hooper, who joined the company's high polymer research staff in February, 1949, had been associated for the preceeding 15 years with E. I. du Pont de Nemours & Co., in the acetate division of the rayon department.

John F. Synan has been appointed manager of the product development department of Mathieson Chemical Corp., and will report to Dr. George P. Vincent, director of product development. Mr. Synan, who has been with Mathieson since 1939, is noted for his developments involving Textone, a sodium chlorite product for textile processing.

J. Carl Page, a member of the executive staff of Harriett and Henderson Cotton Mills, Henderson, N. C., has been elected president of the Vance County Community Chest.

William Collier, superintendent of the American Throwing Co. plant at Griffin, Ga., is reported as being "out of danger" after having been shot through the hand and chest recently at his home in Griffin. No motive was given for the shooting and at a recent date police still were seeking the person or persons suspected of firing the shots.

Andrew E. Collins, formerly general manager and treasurer of Empire Dye Works, Paterson, N. J., has joined Reeves Bros. as technical adviser to the company's finishing operations.

Paul A. Redmond of Birmingham, Ala., president of Alabama Mills, Inc., recently was elected president of the Southern States Industrial Council.

Stephen A. McClellan has resigned as president of the Institute of Textile Technology, Charlottesville, Va. Mr. McClellan is also president of Specialties, Inc., Syosset, N. Y., and pressure of work in connection with the national defense effort occasioned his resignation at the institute. An executive committee appointed by the board of trustees will direct the institute's program until a new president is selected. . . . Jerry A. Garrett, analytical chemist, is a recent addition to the technical staff at the institute. Mr. Garrett previously was associated with Beaunit Mills, Childersburg, Ala., and the plant of Celanese Corp. of America at Rome, Ga.

Paul P. Johnson has joined the administrative staff of Universal Winding Co., Cranston, R. I., and will assist President Robert Leeson in administrative and financial planning. Mr. Johnson was for 17 years connected with Thompson Products, Inc., Cleveland, Ohio, and served as president of Waltham Watch Co. from 1948 to 1949. Just prior to joining Universal he held the position of director of plant location and rebuilding with Saco-Lowell Shops, Biddeford, Me.

Percy W. Ellis, formerly vice-president and treasurer of Sykes, Inc., has joined Atkinson, Haserick & Co., and has been assigned to the sales force of the cotton machinery department. He will be attached to the firm's Boston, Mass., office.

Donald D. McMahon, formerly associated with Peerless Woolen Mills, Rossville, Ga., has been named manager of Lebanon Woolen Mills, Lebanon, N. H. In his new post Mr. McMahon succeeds Chester C. Wood, who resigned because of illness after having been with the mills 18 years.

William N. Freyer, left, has been elected executive vice-president of Bigelow-Sanford Carpet Co., Inc. Mr. Freyer, formerly vice-president and assistant to the president, joined Bigelow in 1946. Previously he had been with Montgomery Ward and R. H. Macy & Co. Under the new set-up, the manufacturing, sales, purchasing and products divisions will report directly to Mr. Freyer. . . . F. Albert Hayes, vice-president for purchasing at Bigelow, has been named to head a newly-formed defense contracts division and will be assisted by Russell F. Hurst, formerly assistant to the vice-president in charge of manufacturing.

Robert A. Russell, vice-president of Russell Mfg. Co., Alexander City, Ala., has been acclaimed Alexander City's 1950 "Man of the Year" for his "unselfish service to the city and his fellow-man." He won the honor over 29 other candidates, receiving more votes than all the others together. At a Chamber of Commerce dinner he was given a plaque of commendation for his distinguished services. In January of this year, Mr. Russell was installed as first vice-president of the Alexander City Chamber of Commerce and automatically became chairman of that organization's important finance committee. He was also named to the chamber's board of directors.

Four personnel changes in three divisions of the rayon department were announced recently by E. I. du Pont de Nemours & Co. Dr. Edward F. Wesp, director of the viscose rayon research section, has been made assistant manager of the planning division, succeeding W. Samuel Carpenter, III,

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who recently returned to the rayon division as assistant director of production. . . . Dr. E. A. Tippetts, assistant director of the viscose rayon research section, becomes director. . . . Henry C. Froehling, manager of development and promotion of Orlon acrylic fiber and Acele acetate rayon, is appointed assistant director of sales of the acetate division in charge of sales promotion and development and fabric development. Leonard A. Yerkes, Jr., is also an assistant director of sales of the acetate division. He will continue in charge of the sale and distribution of Orlon and acetate rayon fibers. . . . Walter R. Heed, who has been working on sales promotion of Orlon acrylic fiber for the last year, has been made manager of the sales promotion section of the acetate division.

Charles W. Coker, executive vice-president of Sonoco Products Co., Hartsville, S. C., was honored last month by the Hartsville Rotary Club when he was presented the club's community service award cup as "Hartsville's Outstanding Man of the Year 1950."

Macon P. Miller, executive of Fieldcrest Mills, Leaksville, N. C., has been appointed director of civilian defense for Leaksville. . . . James B. Lowery and Charles B. Harper recently received promotions at the Fieldcrest towel mill at Fieldale, Va. Mr. Lowery, formerly a student employee, was appointed assistant superintendent and Mr. Harper was promoted to foreman of the carding and spinning departments after having worked through the plant under the student training program. Both Mr. Lowery and Mr. Harper are graduates of North Carolina State College, Raleigh.

W. H. Spencer, Jr., has been named by Burlington Mills Corp. to assume general supervision of two of its spun rayon weaving plants: the Newton (N. C.) Plant and the Cascade Plant at Mooresville, N. C. Mr. Spencer has been in the textile business almost 20 years and prior to joining Burlington several months ago had been associated for about five years with Dan River Mills, Danville, Va.

Leonard S. Little retired Jan. 31 as manager of the textile service section of the organic chemicals department of E. I. du Pont de Nemours & Co., Inc., under the company's retirement policy. He will open offices as a chemical-textile consultant and part of his time will be devoted to Du Pont, by which he has been retained. . . . No successor to Mr. Little is to be named, but A. R. Chantler, special advisor on sales to the organic chemicals department, will direct activities of the textile service section from Wilmington, Del., it is reported. . . . William T. Wood, director of production of the Du Pont Co.'s nylon division for the last three years, has been appointed to the new position of assistant manager of the division, in charge of Fiber V operations. Charles M. Switzer continues as assistant manager of the division, in charge of nylon. . . . Charles E. Mears, manager of the nylon plant at Chattanooga, Tenn., is appointed director of production for nylon, and Edgar H. Bleckwell, manufacturing superintendent of the Chattanooga plant, succeeds Mr. Mears as plant manager. . . . Wanton E. Gladding, personnel manager of the Du Pont Company's nylon division for the last two years, has been named manager of Du Pont's Fiber V plant which is to be built at Kinston, N. C., starting this year. Mr. Gladding was employed by Du Pont in 1925 as an operator at the Buffalo, N. Y., plant and in October of that year was sent to Europe with a group studying rayon production methods. Returning to Buffalo in June, 1926, he was successively a shift supervisor, area supervisor, and chief supervisor, while working at Du Pont rayon plants in Old Hickory, Tenn., and Richmond, Va., in addition to Buffalo. After a training period at the pioneer nylon plant at Seaford, Del., in 1940 and 1941, he was appointed manufacturing superintendent of the new Martinsville, Va., nylon plant in the Fall of the latter year. On June 1, 1942, he was named plant manager at Martinsville and on October 1, 1945, he was transferred to Seaford as plant manager.

C. W. Bendigo, since 1945 editor in chief of *Textile World*, has joined American Cyanamid Co. in the firm's new products development department headed by Dr. L. P. Moore. . . . Prentice M. Thomas of Columbus, Ga., formerly associate editor in the South, has succeeded Mr. Bendigo as editor in chief of *Textile World* . . . Bernard W. Crowe has joined American Cyanamid Co. and has been assigned to the Textile Fiber Research Group at the Stamford, Conn., research laboratories. He will be concerned with evaluation and development of the textile properties of synthetic fibers for use in spun yarn and filament yarn fabrics. He has been associated with George Royle & Co., Philadelphia; Callaway Mills Co., LaGrange, Ga.,; and Johnston (S. C.) Mill.

Joseph Bowler, Jr., who has been associated with Allen Beam Co. of New Bedford, Mass., for the past 3½ years, and who has been covering the states of South Carolina, Georgia and Alabama for the past 18 months, has been assigned the additional territory of Virginia, North Carolina, Tennessee and Mississippi. He will continue to make his headquarters at 107 McGee Street, Greenville, S. C.

Rufus F. Hale, assistant treasurer of Pacific Mills, Boston, Mass., has been appointed a consultant to the Economic Stabilization Administration on wool matters. . . . Marshall Newell, long-time Draper Corp. official, and John W. Menefee, Jr., who has been serving recently as Washington representative for the National Association of Textile Machinery Manufacturers, have been named as National Production Authority consultants.

Fuller E. Callaway, Jr., left, of LaGrange, Ga., is new president of the Georgia Tech Alumni Foundation. Mr. Callaway is president of the Fuller E. Callaway Foundation at LaGrange. . . . B. P. Albright, assistant vice-president of the USEO Division of Callaway Mills Co., LaGrange, has been named chairman of the 1951 Red Cross Drive in LaGrange. . . . Nathan Gross, assistant superintendent of Callaway's Unity worsted plant, served as chairman of the March of Dimes drive in LaGrange this year. He also is president of the Junior Chamber of Commerce in LaGrange.

John L. Stickley, yarn sales agent of Charlotte, N. C., has been elected chairman of the local Salvation Army board of directors. . . . R. M. Mauldin of Universal Winding Co. was elected to a four-year board term.

John H. Vogel and William L. Duffy have been elected vice-presidents of Meinhard, Greeff & Co., Inc., of New York City. Mr. Vogel has been with the firm since 1934 except for 3½ years in the Army Air Force. Mr. Duffy has been with the company for the past eight years, having previously been credit manager of the midtown branch of the Bank of Manhattan Co. . . . Edward F. Skinner and Paul Whitin, Jr., were elected assistant vice-presidents. Mr. Skinner, previously assistant secretary, has been Meinhard, Greeff & Co., Inc.'s representative in the South, where he is located at the company's Southern office in Charlotte, N. C. Mr. Whitin is the New England representative, located at 79 Milk Street, Boston. He formerly was general superintendent of the Goodall-Sanford, Inc., of Sanford, Me., and at one time was with the Paul Whitin Mfg. Co. of Northbridge, Mass.

Karl M. Robbins, chairman of the board of Robbins Mills (Va.), Inc., Clarksville, Va., has been named a director of the Central National Bonk of Richmond, Va. . . . Isaac Pitts, secretary and superintendent of Hermitage Cotton Mills, Camden, S. C., has been elected a director of the First National Bank of Camden. . . . A. G. Odell, president and treasurer of Kerr Bleaching & Finishing Works, Inc., Concord, N. C., has been elevated from president to chairman of the board, a new position, at the Concord National Bank.

J. J. Milam has been appointed purchasing agent of United States Rubber Co.'s textile division. In addition to his purchasing duties, Mr. Milam will handle waste sales for the division. His headquarters will be at Stark Mills, Hogansville, Ga. A native of LaGrange, Ga., Mr. Milam joined the rubber company in 1940 at Hogansville, handling production scheduling. He was transferred to New York in 1941 and placed in charge of sales and production co-ordination. In 1949 he was appointed assistant to the general sales manager of the textile

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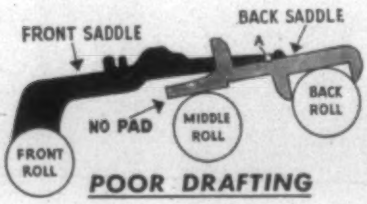

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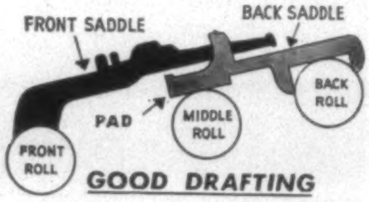

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division. . . . William A. Singleberry has been appointed general control manager of United States Rubber Co.'s textile division. He will have his headquarters at the general offices in Rockefeller Center, New York City. Mr. Singleberry joined the company in 1933 as paymaster at Winnsboro (S. C.) Mills. He was transferred to Stark Mills, Hogansville, Ga., in 1934, as cost accountant. In 1937, he became office manager of the mills in Shelbyville, Tenn., and was appointed office manager at Winnsboro in 1946.

John M. Gammon has been appointed Southern district manager for Nopco Chemical Co. of Harrison, N. J., and Cedartown, Ga. He succeeds George H. Small, who died last Oct. 12. Mr. Gammon is a 1931 graduate of North Carolina State College with a B.S. degree in textile manufacturing. He joined Nopco immediately after his graduation and at the time of his recent appointment was sales representative and district manager for Nopco and the firm's Metasap Division in the Ohio-Michigan-Indiana area. He will make his home in Cedartown, Ga., and his new territory includes the states of Tennessee, South Carolina, Georgia, Louisiana, Mississippi, Alabama and Arkansas. . . . In the Central District, from which he is being transferred, Mr. Gammon will be replaced by Travis V. Rankin.

John P. McLaney, Webster C. English and Andrew J. Beall, Jr., are new sales representatives at Allis-Chalmers general machinery division offices in the South. Mr. McLaney and Mr. English have been assigned to the Charlotte, N. C., district office and Mr. Beall to the New Orleans, La., office. All three of the men joined Allis-Chalmers in 1949 following their graduation from college. All completed Allis-Chalmers' graduate training course.

Richmond Viall, president of Marshall & Williams Corp., builder of cloth control devices for finishing machinery at Providence, R. I., has been elected to the board of managers of the Associated Industries of Rhode Island.

Among textile manufacturing executives and suppliers attending the Industrial College of the Armed Forces' field economic mobilization course at Charlotte, N. C., Jan. 22 to Feb. 2 were the following: William C. Cannon, vice-president of Cannon Mills Co., Kannapolis, N. C.; Saxby Chaplin, department manager for Grinnell Corp., Charlotte; Lewis E. Chittum, treasurer of American Yarn & Processing Co., Mt. Holly, N. C.; David Clark, president and editor of TEXTILE BULLETIN, Charlotte; Jack C. Conniff, industrial engineer for Dan River Mills, Inc., Danville, Va.; R. I. Dalton, Sr., and R. I. Dalton, Jr., vice-president and Southern agent and selling agent, respectively, for Whitin Machine Works, Charlotte; J. Holmes Davis, Jr., president of Spofford Mills, Inc., Wilmington, N. C.; Nyal W. Deems of E. I. du Pont de Nemours & Co., Waynesboro, Va.; Hamilton I. DePass, executive assistant at Rock Hill, (S. C.) Printing & Finishing Co.; Duncan V. Elgin, treasurer of J. A. Baker & Co., Charlotte; Vernon E. Fuller, branch manager for Grinnell Co., Charlotte; Edward G. Glover, treasurer of Textile Mill Supply Co., Charlotte; Rodney B. Graham, Jr., colorist for Santee Print Works, Sumter, S. C.; Thomas P. Graham, vice-president of Charlotte Supply Co.; Gordon Hacker, manager of Gaston County Dyeing Machine Co., Stanley, N. C.; Victor A. Hanson, vice-president and general manager for Precision Gear & Machine Co., Charlotte; W. C. Hayes, production superintendent for Winnsboro (S. C.) Mills of United States Rubber Co.; Harmon Howarth, plant manager for Celanese Corp. of America, Rock Hill; J. W. Ivey, vice-president of Moreland Chemical Co., Spartanburg, S. C.; Dan S. LaFar of Gastonia, N. C., vice-president of the several LaFar-operated mills; John L. Latham, president of Latham Cotton Co., Greensboro, N. C.; F. Sadler Love, secretary-treasurer of the American Cotton Manufacturers Institute, Charlotte; G. W. MacDow, executive assistant, Pneumafil Corp., Charlotte; Carle W. Mason, plant superintendent for American Cyanamid Co., Charlotte; James T. McAden, Jr., editorial director of TEXTILE BULLETIN, Charlotte; John L. Morgan, Jr., general superintendent of the Stanley Mills and Ragan Spinning divisions of J. P. Stevens & Co., Inc., Stanley; Lewis S. Morris, assistant to the comptroller, Cone Mills Corp., Greensboro; Robert H. Morrison, Jr., assistant superintendent at the Tennessee Eastman Division of Eastman Kodak Co., Kingsport, Tenn.; John K. P. Odell, assistant treasurer of Kerr Bleaching & Finishing Works, Concord, N. C.; James M. Oeland, controller and assistant treasurer for Monarch Mills, Union, S. C.; J. Norman Pease, president of J. N. Pease & Co., Charlotte; Thomas W. Porter, assistant general manager for Ross & Witmer, Charlotte; Russell V. Powell, production engineer for Truitt Mfg. Co., Greensboro; Hugh Puckett of Charlotte, Southern district manager for American Cyanamid Co.; J. C. Ridenour, assistant to the vice-president of Cannon Mills Co., Kannapolis; James Y. Rogers, Jr., secretary of James E. Taylor & Co., Charlotte; Alex Rose, plant engineer for Celanese at Rock Hill; Ben R. Rudsill, president and treasurer of Carlton Yarn Mills, Inc., Cherryville, N. C.; Newlin P. Schenck, assistant sales manager of Cleveland Mills Co., Lawndale, N. C.; Fred L. Smyre, Jr., president and treasurer of A. M. Smyre Mfg. Co., Gastonia; E. A. Terrell, Sr., president of Terrell Machine Co., Charlotte; Wallace B. Truitt, vice-president of Truitt Mfg. Co., Greensboro; and Frank M. Volberg, senior chemical engineer for Tennessee Eastman at Kingsport. Maj. Edgar A. Terrell, Jr., Armored Corps U.S.A.R., who is vice-president of Terrell Machine Co., Charlotte, was on temporary active duty as administrative director of the economic mobilization course.

Arthur B. Borden has been elected first vice-president of Borden Mills, Inc., Kingsport, Tenn., succeeding his father, the late

Gen. Howard S. Borden. Mr. Borden also continues as the treasurer.

Julius W. Abernethy, formerly vice-president, has been elected to the newly-created position of executive vice-president of Mooresville (N. C.) Mills. Gordon G. Matheson, previously assistant to the president, has been made a vice-president and Leighton T. Horton has been elected an assistant secretary. H. C. Cobb, Jr., general superintendent, has been elected to the board of directors. All other officers were re-elected.

Robert T. Stevens, chairman of the board of J. P. Stevens & Co., Inc., last month was named head of the government's most influential advisory group—the Business Advisory Council of the Commerce Department. The council is composed of most of the nation's leading industrialists and has been in operation 17 years. Mr. Stevens is a director of numerous firms, including Jackson Mills at Wellford, S. C., and Alexander Smith & Sons Carpet Co.

Waite C. Hamrick, Jr., executive of Alma and Musgrove Mills and Paola Mfg. Co., Gaffney, S. C., recently was named first president of the Cherokee County School Trustees Association.

J. Guyton Boston has been appointed sales manager of acetate filament yarn for Celanese Corp. of America. Mr. Boston, previously assistant to Harry Price, vice-president, will be responsible to W. L. O'Donovan, manager of the filament yarn division.

Frank Ix, III, son of Frank Ix, Jr., manager of the Charlottesville, Va., plant of Frank Ix & Sons (Va. Corp.), recently was married to Marilyn F. Leander of Charlottesville. The young couple will make their home in Charlotte, N. C.

Charles F. Alexander has been named manager of the industrial department of the National Safety Council, Chicago. Before joining the council Mr. Alexander was associated for five years with Cherry-Burrell Corp. of Chicago.

James H. Martin, Jr., who has been general superintendent of Rockfish-Mebane Yarn Mills, Inc., with plants at Hope Mills, Cumberland and Mebane, N. C., has resigned that position to become general superintendent of American Yarn & Processing Co., with headquarters at Mt. Holly, N. C. . . . Joseph L. Wright, who previously was general superintendent for A.Y.P., resigned to become assistant to General Manager L. R. Briggs of the Johnston chain of mills, with headquarters at Charlotte, N. C.

Joe T. Bohannon, Jr., has been appointed manager of the Chattanooga, Tenn., branch of American Aniline Products, Inc. Mr. Bohannon joined the firm 13 years ago and for several years prior to the war was the company's representative in the Chattanooga area. He served with a Navy torpedo boat

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squadron during the war, and since his release from the Navy has represented A.A.P. in Georgia and Alabama.

W. Blair Carroll, head of the Alabama Mills laboratory at Birmingham, Ala., has been called to active duty with the 31st National Guard Division which is now in training at Fort Jackson, S. C. He is a captain.

John C. Roberts of Gastonia, N. C., vice-president and treasurer of Textiles, Inc., retired last month as potentate of Oasis Temple (Charlotte, N. C.), Ancient Arabic Order of the Mystic Shrine. Mr. Roberts, along with A. G. Myers, president of Textiles, Inc., and A. J. Gocking, Charlotte cotton broker, is a member of the temple's board of trustees. The membership of Oasis Temple comes from the western and Piedmont areas of North Carolina.

J. P. Redston, who has been sales manager for the specialty oils division of E. F. Drew & Co., Ltd., at Toronto, Ont., has been transferred to New York City as sales manager of the Drew textile chemicals department, where he will supervise the sales and service activities of the entire line of detergents, finishing oils, fiber lubricants, wetting and emulsifying agents and other specialties. Mr. Redston was educated in England, has been associated with a number of prominent Canadian textile companies, and has been very active in textile trade association work.

Frank H. Cunningham, general superintendent of the Mills Mill plants in the Reeves Bros. textile group, recently was named chairman for the District of Spartanburg (S. C.) County, Boy Scouts of America.

Peter B. Kline has been appointed manager of stainless sales for Edgecomb Steel Co. of Philadelphia, Pa., and Charlotte, N. C. Mr. Kline formerly was associated with the Rustless Division of Armco Steel Corp.

John S. Chafee has been elected president of Pawtucket (R. I.) Spinning Ring Co. in addition to his duties as executive vice-president of Saco-Lowell Shops, of which the Spinning Ring firm is a subsidiary. As president of Pawtucket Spinning Ring Co., Mr. Chafee succeeds David F. Edwards, who is president of Saco-Lowell Shops.

G. I. Davenport has been elected president of Catlin Farish Co., Inc., as well as Henrietta (N. C.) Mills and Martel Mills Corp., which operates plants at Asheville and Lexington, N. C., and at Batesville and Spartanburg, S. C. He succeeds the late G. Ellsworth Huggins, who died Jan. 6. Mr. Davenport also was elected a director. . . . P. W. Siegert has been elected president of Catlin Yarn Co., Inc., succeeding Mr. Huggins. Mr. Siegert previously was treasurer and vice-president of the firm. He also was elected a director of Henrietta Mills and Martel Mills Corp. Mr. Davenport has been elected a director of Catlin Yarn Co.

W. E. Holt, president of Wennonah Cotton Mills Co. at Lexington, N. C., for the past 33 years, has been elected chairman of the board and has been succeeded as president by W. E. Holt, formerly secretary and treasurer, and who will continue to serve as treasurer. . . . E. E. Riddle was made vice-president and secretary in addition to his duties as general manager.

C. L. Hamilton has succeeded his late brother, George W. Hamilton, as president of Crown Cotton Mills at Dalton, Ga. Formerly vice-president and treasurer, the new president will continue to serve as treasurer. David Hamilton, secretary, has been named vice-president succeeding C. L. Hamilton. He will continue to serve as secretary.

Karl H. Inderfurth, formerly advertising manager for Universal Winding Co., Providence, R. I., has opened an office in the Liberty Life Building at Charlotte, N. C., where he will maintain a Southern office for Charles S. Tanner Co. of Providence, producer of starch, gum, dextrine and glue. Mr. Inderfurth also will represent William McCaskie Co. of Westport, Mass., in North Carolina.

W. B. Pickard, after 43 years of service at the Cordova (Ala.) Division of Textron Southern, Inc., retired as general manager Jan. 1 and shortly thereafter became associated with Southern Leigh Textiles, Inc., Birmingham, Ala., dealers in cotton, cotton waste and textile fibers.

Ray W. Bayne of F. W. Poe Mfg. Co. recently was installed as president of the Greenville (S. C.) Textile Club succeeding Charles Tidwell of Dunean Mills. D. E. Gillespie of Mills Mill was named vice-president. Appointed directors were Mr. Tidwell, L. A. Deal of Slater Mfg. Co. and Doris Broadwell of Victor-Monaghan Co.

E. E. Jones, Jr., who has been working out of the Johnston Mills Co. office at Charlotte, N. C., has been put in charge of the new sales office at Winston-Salem, N. C., from where he will handle the firm's line of carded, combed and mercerized yarn in northern North Carolina and Virginia.

Arthur P. Sommer, formerly sales manager of William Crabb & Co., Black Mountain, N. C., has joined Slaughter Machinery Co., Charlotte, N. C., textile equipment manufacturers' representative. Mr. Sommer will cover the Southern territory, concentrating his activities in the Carolinas.

Howard A. Sherman has been elected secretary-treasurer of the General Arbitration Council of the Textile Industry to succeed Paul B. Halstead, who resigned effective March 1 to become associated with Cone Export and Commission Co.

George L. Logan, formerly divisional sales supervisor for Veeder-Root, Inc., Hartford, Conn., has been promoted to sales manager of the firm's counting device division. He will supervise the sales of textile counters and other items through the firm's various offices. . . . C. E. Smith, formerly sales division supervisor, has been appointed assistant sales manager of the counting device division.

Brandon Payne has been appointed general superintendent of Plants Nos. 2, 5, 9 and 10 of Cannon Mills Co. at Concord, N. C. James Funderburk, formerly assistant superintendent of Plant No. 2, succeeds Mr. Payne as superintendent there. Mr. Payne is the son of M. M. Payne, a general superintendent for Cannon at Kannapolis, N. C.

OBITUARIES

Thomas Armstrong Adams, retired textile executive of Brenham, Tex., died Jan. 14. Mr. Adams was successively superintendent, secretary and president of South Texas Cotton Mills, now known as Brenham Cotton Mills, Inc. Surviving are a daughter, a brother and two sisters.

H. M. Aderholdt, vice-president and assistant general manager of Henry River (N. C.) Mills Co., died last month of a heart attack. Surviving are his wife, a son, a daughter, and a brother, Miles, who was associated with him in the firm as general manager and secretary-treasurer.

Eugene Elmo Edmiston, 75, plant engineer at Mooresville, (N. C.) Mills, and a business, civic and religious leader in Mooresville, died Jan. 18 after a brief illness. Mr. Edmiston had been associated with Mooresville Mills for 56 years and was a director of the firm. He served as general chairman of the master mechanics division of the Southern Textile Association in 1933-34. Surviving are three daughters, four brothers and a sister.

Charles M. Engers, 74, traffic manager for Dixie Mercerizing Co., Chattanooga, Tenn., died recently. Mr. Engers had been associated with Dixie since 1912 and was the firm's oldest employee in time of service. Surviving are his son, two daughters and two sisters.

Archibald C. Lineberger, 50, prominent textile executive of Belmont, N. C., died Jan. 17 at a hospital in Charlotte, N. C., after an illness of only three days. At the time of his death he was president of Acme Spinning Co.; vice-president of Knit Products Corp.; a director of Linford Mills, South Fork Mfg. Co., Crescent Spinning Co., Majestic Mfg. Co. and Perfection Spinning Co., all of Belmont, president and treasurer of Piedmont Processing Co.; treasurer and general manager of Rowan Cotton Mills of Salisbury, N. C. Mr. Lineberger also was a past president of the Southern Combed Yarn Spinners Association. His late father, a noted textile executive for many years, is credited with de-

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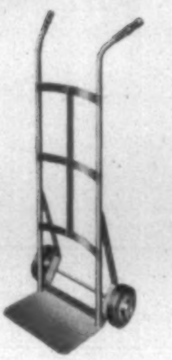


Fig. A-1448 All Steel UTILITY HANDTRUCK
Ideal for bags, cartons, cases and small kegs. Solid nose plate, curved cross bars, welded center strap; fitted with step climbers. load rating 400-500 pounds.

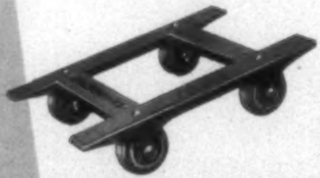


Fig. L 1191 Malleable Iron CASE TRUCK
Built to take the shock of heavy packing cases, boxes and machinery. Indestructible yet light in weight One ton capacity.

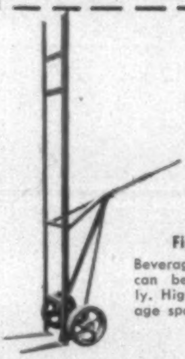
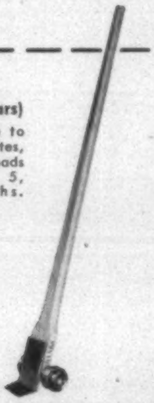


Fig. CC-10 TIER TRUCK
Beverages, cartons and crates can be handled more efficiently. High stacking cuts down storage space. Capacity 750 pounds.



Lever Trucks (Pry-Bars)
Tremendous leverage to handle heavy cases, crates, machines, etc. Raises loads 9" from the floor, 5, 6 and 7-foot lengths.

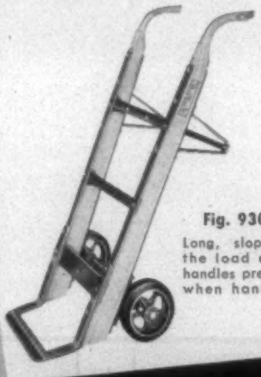


Fig. 9304 HAND TRUCK
Long, sloping lines "break" the load easily. Steam-bent handles prevent crushed fingers when handling large cases.

Fig. 500 JACK and PLATFORM TRUCK
Efficient, low cost lift jack and platform system increases production, cuts costs. Many standard platform sizes available; special sizes to order.

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veloping the combed yarn spinning industry in the Belmont area. Surviving Mr. Lineberger are his wife, four daughters, one son,

Thomas J. McNeely, 80, retired textile executive, died suddenly last month at his home in Eustis, Fla. At the time of his retirement in 1945 Mr. McNeely was superintendent of Davidson (N. C.) Mills, Inc., and prior to that was superintendent of Locke Cotton Mills Co. at Concord, N. C., for several years. Surviving are his wife, four sisters and a brother.

Charles W. Meade, 61, shop foreman on the second shift at Jefferson (Ga.) Mills until ill health forced his retirement in 1946, died Feb. 5. Surviving are his wife, a son and a daughter.

Burton F. Mitchell, 52, retired textile executive of Mount Holly, N. C., died Jan. 2 at the home of his mother in Shelby, N. C. A graduate of North Carolina State College School of Textiles, Mr. Mitchell worked for a while with the Armstrong group of mills in Gaston County, N. C., and then for 29 years as an executive of American Yarn & Processing Co. at Mount Holly. Surviving are his mother, his wife, a daughter and a brother.

Silas R. Rhoads, 62, assistant to the manager of special sales for Proctor & Schwartz, Inc., textile machinery firm of Philadelphia, Pa., died last month. Mr. Rhoads had been with the company more than 30 years. He is survived by two brothers.

Lucien C. Turner, Sr., formerly superintendent of Summerville (Ga.) Cotton Mills, died last month at a hospital in Atlanta after a brief illness. For the past three years Mr. Turner was Summerville city clerk.

Eugene W. Wall, 56, assistant treasurer and chemical director of Kali Mfg. Co., Philadelphia, Pa., died Jan. 29. Mr. Wall joined Kali in 1922 after previously having been associated with General Chemical Co. and Heyden Chemical Co. He was a lecturer and writer on many technical subjects and did some of the original research work on cold light and the application of fluorescent colors to textiles. He is survived by his wife, one son, his mother and a sister.

H. F. Williamson, 83, retired textile executive of Anniston, Ala., died recently. Mr. Williamson came to Anniston as manager of American Net & Twine Co., now known as Linen Thread Co., and retired about 15 years ago after serving the firm 47 years. Active in fraternal and civic organizations, he was a former governor of Alabama Kiwanis Clubs and held high positions in Masonic organizations throughout Alabama.

L. L. Wilson, 64, at one time superintendent of the No. 2 and 3 plants of Harriett Cotton Mills at Henderson, N. C., died Feb. 3. Mr. Wilson retired from active duty some years ago because of ill health. Surviving are four brothers and a sister.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

GASTONIA, N. C.—Farmac, Inc., has been chartered by the state to knit, spin and weave. Capitalized at $100,000, the firm lists stock subscribers as D. R. Lafar, Jr., Dan Lafar and Burke M. McConnell, all of Gastonia.

LAKEVIEW, N. C.—Officials of Wyandotte Worsted Co., Waterville, Me., have stated that the construction of a Southern branch weaving plant on a recently-purchased tract here is not in immediate prospect.

LAGRANGE, GA.—A revised group hospitalization insurance plan, providing much greater coverage, went into effect Feb. 5 at Dixie Mills, Inc. Under the new plan, the firm is paying a substantial part of the cost of the insurance, making the cost to the employee very low in relation to the benefits offered.

SPINDALE, N. C.—Building permits totaling $108,000 were issued last month to Stonecutter Mills Corp. for an addition to the present plant and for a new manufacturing building. The addition to the plant will cost $63,000 and the new building will cost $45,000.

"Give him the part, Melton, no matter whether he voted for the union or not."

COLUMBIA, S. C.—A charter of incorporation was issued last month to Calvine-Southern, Inc., Columbia, to manufacture textile products. Leon Salkind is president of the new corporation, which has $50,000 capital stock. Mr. Salkind is president of Calvine Cotton Mills, Inc., operating separate plants in Charlotte, N. C., producing print cloths and tobacco cloth, and of its parent firm, Leading Embroidery Co. of North Bergen, N. J.

GREENVILLE, S. C.—The 100 by 200-foot treating shed at Southern Weaving Co. was completely destroyed Jan. 23 by fire. The treating shed was not connected with the main portion of the plant and the blaze was confined to the structure in which it started. The structure destroyed by the fire contained textile orders for the automotive industry, cotton, treating materials and other raw materials.

DANVILLE, VA.—Europeans in the near future will spend a day at Dan River Mills via the radio. A team from the Voice of America visited the plant recently with recording equipment, and against a background of noise created by looms, cards and spinning frames in actual operation, interviewed personnel from top management down to the laborer level. An official explained that the program would be one of the many documentaries beamed to foreign countries showing American industry at full production under satisfactory democratic regime.

COLUMBUS, N. C.—Deering, Milliken & Co. recently started work on a new $2,500,000 weaving mill near Columbus. Daniel Construction Co. of Greenville, S. C., and Birmingham, Ala., holds the general contract for the entire project. Plans were prepared by the Deering Milliken engineering department. This 180,000 square foot structure to be known as Hatch Mill is basically a one-story structure. However, a partial basement of over 40,000 square feet is provided plus a mezzanine floor of the same area. The basement will be utilized for storage and warehouse space while the mezzanine floor will house offices and spinning and packaging facilities. The basement and first floor are cast as a flat concrete slab without beams to provide a smooth ceiling for the basement permitting greater storage height. Sheer head columns are used to support the 10¼-inch thick floor and provide clean ceiling for the movement of the lift trucks throughout the basement area. This totally enclosed air conditioned structure will provide for the preparation of yarn for wool and blended fabrics as well as the weaving of this yarn into suitings. Two apparatus towers in the front of the building will provide for the air conditioning equipment for the mill.

HENDERSON, N. C.—Officials of Henderson and Harriett Cotton Mills Feb. 2 announced plans for an expansion program involving an expenditure of about $2,000,000. Additions will be constructed to plants in North and South Henderson. Additional machinery has been contracted for.

CHARLOTTE, N. C. — The newly-organized Leno-Tex Mills, Inc., of Charlotte has purchased the Servall Fabrics plant here at 4800 Wilkinson Boulevard. Additional equipment has been installed and the concern is now producing net bags for laundries. It also expects to produce some heavy fabrics for the Armed Forces. Coit M. Robinson, Sr., of Lowell, N. C., is president

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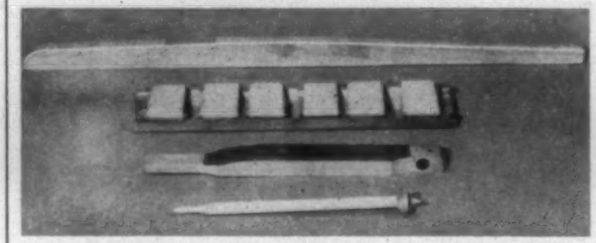

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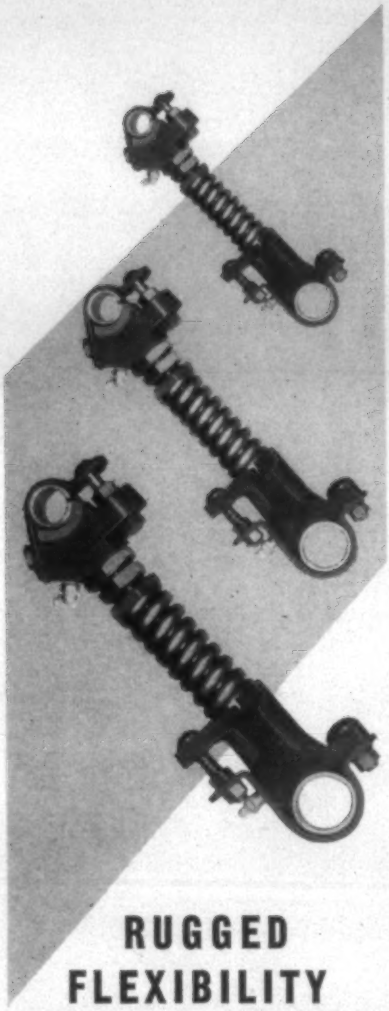

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of the new concern; Charles L. Gallman is vice-president; Mrs. Mary H. Boger, secretary; and Coit M. Robinson, Jr., is treasurer.

BIDDEFORD, ME. — Pepperell Mfg. Co. this year is celebrating its 100th year of operation. The company was organized in 1852 by Samuel Batchelder, and named after a colonial military leader. Dividends have been paid to stockholders for 100 consecutive years, the company reports. Operations are conducted in four states: Maine, Massachusetts, Georgia and Alabama.

COWPENS, S. C.—An order filed Feb. 6 at the Court House in Spartanburg by Circuit Judge Thomas B. Greneker freed Linda Cotton Mills of county tax obligations for three years. The order also awarded the concern, as reimbursement for taxes paid under protest in 1949, a judgment against Spartanburg County for $2,000 with interest at six per cent from Dec. 22, 1949. The action was brought under State Act 1122 of 1930, amended in 1933, affecting new enterprises.

LONGHURST, N. C.—Roxboro (N. C.) Cotton Mills recently announced plans for a three-year modernizing program at its Longhurst Plant mill village, involving the installation of sewage lines, paving of streets and remodeling of homes.

BISHOPVILLE, S. C.—Reeves Bros., Inc., has acquired option on a 70-acre plant site near Bishopville, on the Lynches river. It is reported in trade circles that Reeves will construct a spun rayon finishing unit on the site. Reeves officials, however, have not announced to what purpose the proposed plant will be put. The site investigation was in charge of Lockwood Green Engineers, Spartanburg, S. C., in consultation with the general industrial agent of the Seaboard Air Line Railroad and the S. C. State Planning Commission.

SPARTANBURG, S. C.—A $600,000 building and improvement program is now under way at Drayton Mills, a subsidiary of Deering, Milliken & Co., and is expected to be completed by June. One of three buildings will be a 17,000 square foot twister plant for the rayon department. About 1,800 new twister spindles will be added to the department and others will be moved from the present location to the new building. A small building addition to the carding department will house additional equipment including one new comber, 26 new cards and 32 new deliveries of drawing. The third building will house air conditioning equipment. This will provide more space for the rayon preparation department. Daniel Construction Co. of Greenville, S. C., is contractor for the construction.

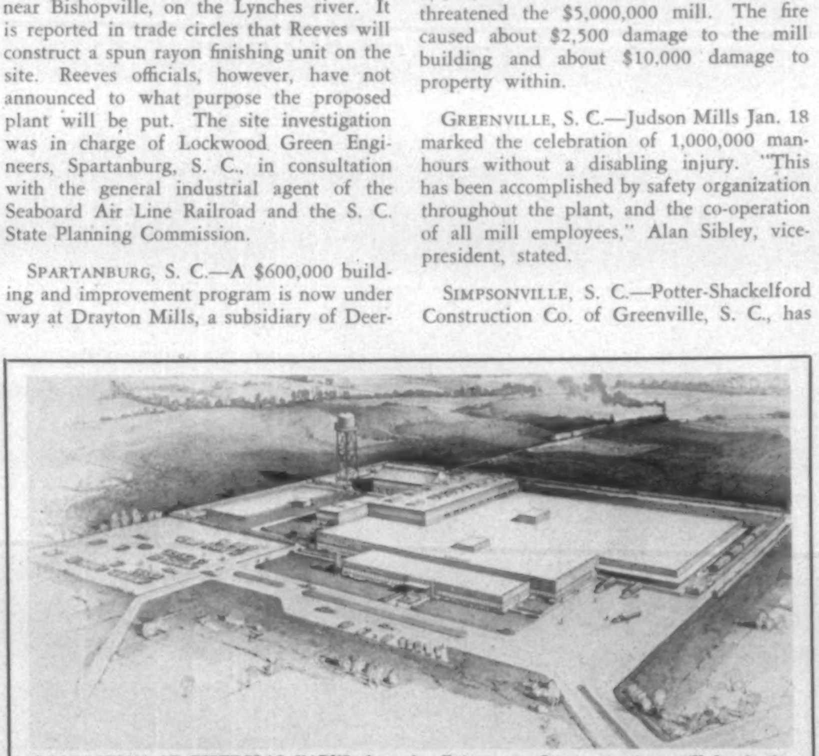
ROME, GA.—Rome Textile Finishing Co. has been organized with Raymond Nason as president, and presently is constructing a new plant with separate warehouse and finishing department. Infra-red ovens and roll coating equipment is being installed for the application of rubber backings to chenille rug yardage and other materials up to 144 inches, with continuous dyeing operation in sequence. Mildew and flameproofing will also be done on a commercial basis.

HIGH SHOALS, N. C.—R. H. Pinnix, general contractor of Gastonia, N. C., has been awarded the contract at $306,787 for construction of a weaving and spinning building at Carolinian Mills, Inc.

NEW ORLEANS, LA. — A locomotive rammed a large trailer truck as it was loading at Lane Cotton Mills Jan. 8 and caused a $12,500 fire that for a while seriously threatened the $5,000,000 mill. The fire caused about $2,500 damage to the mill building and about $10,000 damage to property within.

GREENVILLE, S. C.—Judson Mills Jan. 18 marked the celebration of 1,000,000 man-hours without a disabling injury. "This has been accomplished by safety organization throughout the plant, and the co-operation of all mill employees," Alan Sibley, vice-president, stated.

SIMPSONVILLE, S. C.—Potter-Shackelford Construction Co. of Greenville, S. C., has



PRODUCTION OF FIBERGLAS YARNS through efficient, one-floor operations will be facilitated in the new plant of Owens-Corning Fiberglas Corp. at Anderson, S. C. This artist's sketch shows the layout of the plant, which will cover 175,000 square feet and be located on a 130-acre plot on the Iva Highway, four miles south of Anderson. It is planned to have the plant in operation about mid-1951 to meet currently large military requirements, as well as increasing civilian demands, for Fiberglas yarns—used widely as a base for electrical insulation; to reinforce plastics, paper, tape and certain industrial rubber products; for cloths coated with rubber, vinyl and neoprene, and for decorative curtain and drapery fabrics. General contractors are the Daniel Construction Co., Greenville, S. C. Plans were prepared by Lockwood Greene Engineers, Inc., of New York and Spartanburg, S. C.

been awarded the contract for construction of a cloth room extension at the local plant of Woodside Mills. J. E. Sirrine Co. of Greenville is engineer for the project. The extension will cost approximately $16,000.

ROCK HILL, S. C.—The Celanese Corp. of America expects to begin producing synthetic staple fiber late this year at its Celriver plant here. Production now is acetate continuous filament yarns. Harmon Howarth, general manager, reports satisfactory progress on the newly-started multi-million-dollar expansion program which includes both additional construction and installation of machinery and other equipment.

GRACE, S. C.— Plans have been announced for construction of a large warehouse at the Grace Bleachery of Springs Cotton Mills. The warehouse will be two stories and will provide about 1,000,000 square feet of storage area. Cost of the warehouse is estimated at more than $500,000.

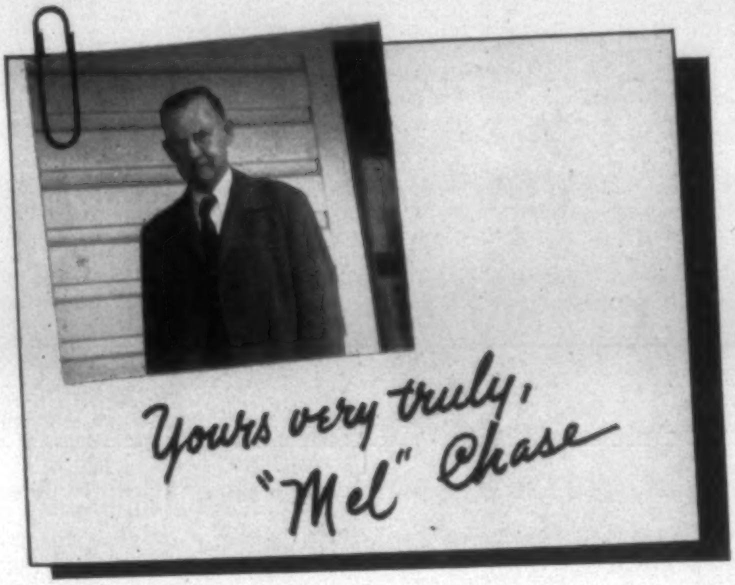
TRION, GA.—The cotton mill cloth room at the Trion Division of Riegel Textile Co. has been moved to the former glove factory building, thus providing space in the old location of the cloth room for installation of an additional 276 looms. The glove factory, as previously noted, is being moved to new facilities recently acquired in Greenville, Ala.

ICARD, N. C.—Herman Sipe & Co., Hickory construction firm, is in the process of modernizing the plant of Icard Cordage Co. with new floors, walls and roof.

DALLAS, TEX.—The local plant of Texas Textile Mills has been leased for eight years to Johnson & Johnson of New Brunswick, N. J. Headquarters of Texas Textile Mills are being transferred from the Dallas plant to a downtown building at the corner of McKinney and Akard Streets. Operation of the Dallas mill, except for storage and office activities, was discontinued last Summer when machinery was transferred to the company's plants at McKinney and Waco.

GREER, S. C.—Grammar school property valued at more than $355,000 was deeded recently to the Greer school district by the Victor Monaghan Co., a division of J. P. Stevens & Co., Inc. D. A. Stansell, manager of the Victor and Apalache Plants of Victor Monaghan Co. in Greer, made the formal presentation of the deeds at a meeting held in the office of the superintendent of the Greer school system. In accepting the gift of the two schools, Greer officials expressed deep gratitude for the interest and co-operation officials of J. P. Stevens & Co., Inc., had continuously shown in the civic affairs of Greer.

DECATUR, ALA.—The Chemstrand Corp. announced Feb. 8 that Daniel Construction Co. of Alabama, Inc., Birmingham, has been named general contractor to erect a multi-million dollar plant for the production of synthetic fibers at Decatur. The announcement was made in Philadelphia, Pa., by Osborne Bezanson, president of Chemstrand, a corporation which is jointly owned by Monsanto Chemical Co. and American Viscose Corp. Mr. Bezanson said that construction will get underway immediately on



Yours very truly,
"Mel" Chase

Announcing . . .

THE OPENING OF A GREENVILLE OFFICE TO BETTER SERVE OUR CUSTOMERS IN THE PIEDMONT AREA!

To better serve our many friends in the Piedmont Area, we have established a Greenville Office in charge of Mr. (Mel) M. D. Chase. Mr. Chase will travel the entire Piedmont Area. He has been in the Textile Mill Supply business for the past twenty years and we feel he is ideally equipped to give a helping hand to you in any and all of your manufacturing phases.

There will also be a competent Draftsman on full-time duty in our Greenville Office to better serve Contractors in the Piedmont Area where steel estimates are required.

We invite you to try our service . . . just telephone Greenville 5-2058 and Mr. Chase will call on you personally.

B. L. MONTAGUE COMPANY, INC.

Steel Fabrication • Textile and Industrial Machinery • Supplies

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a 656-acre site at Decatur. Manufacturing units, laboratories and general offices, as well as a power house and other service facilities, will be erected at the location adjacent to the Tennessee River. The plant will employ approximately 500 persons. Chemstrand acrylic fiber is currently being produced at a pilot plant at Marcus Hook, Pa. In its initial stage, the new synthetic fiber will be manufactured in staple form only. Acrylonitrile, one of the raw materials for the fiber, will be manufactured by Monsanto in a large plant being built at Texas City, Tex.

SENECA, S. C.—At a recent date, all but 65 of the 325 company-owned houses of Utica & Mohawk Cotton Mills, Inc., had been sold to employees. The houses are mostly three, four and five-room structures, on lots averaging about 60 by 120 feet, and are selling at prices ranging from $2,200 to $3,500.

NEWNAN, GA.—Newnan Fibers Co. has been organized here by W. B. Hill of Newnan and James I. Grogan of Boston, Mass. The new firm, which is expected to begin operations late this month, will make blended yarns from various waste fibers, most of which will go to wool manufacturers.

BURNSVILLE, N. C.—Small scale operations was started recently at the new $1,000,000 plant here of the Duplan Corp. Outside work on the modern brick structure has been completed. More than 30 looms are in operation and about 100 more are on the floor awaiting installation.

CLOVER, VA. — Pacific Mills recently closed an option it has held for nearly two years on a 500-acre tract near Clover. While the company's intentions have not been revealed, it is believed that the land was purchased with a view to building a new production plant.

WILLIAMSTON, S. C.—Daniel Construction Co. of Greenville, S. C., has completed work on a $300,000 addition to the Textron Southern plant here and new machinery is now being installed. The addition will enable the mill to increase the number of looms by almost 50 per cent. The plant currently utilizes 684 looms and when installations are completed the mill will have about 1,100 looms. The expansion also includes the additions of some spindles.

LAURENS, S. C.—Installation of machinery for ply twisting at Watts Mills, creating approximately 100 new jobs, will be completed probably late in April, according to an announcement by T. P. Townsend, manager of this division of J. P. Stevens & Co., Inc. The additional machinery is being set up in the former spinning room at the Watts plant, and will be used in the production of ply twisting of spun rayon and cotton yarns. The installation, according to Mr. Townsend, includes ring twisters, cone winders and high speed warpers. The expanded production at Watts Mills will materially increase the number of workers, and in turn step up the payroll of this division of the Stevens company. Applications for the new jobs are being received by the personnel department at the plant. Supervisory positions will be filled by promotions in accordance with company policy, according to the manager.

HUNTSVILLE, ALA.—The Huntsville Mfg. Co. marked its fifth anniversary in January with a program at the Joe Bradley School here. The large crowd that attended, despite pouring rain, heard A. D. Elliott, vice-president and general manager of the textile firm, cite some of the company's accomplishments during this period. They included: (1) The number of employees has more than doubled—from 700 to nearly 1,500. (2) All obsolete machinery has been replaced with up-to-date machinery. (3) Consistent industrial harmony "with no labor interruptions."

HONEA PATH, S. C. — It was reported recently that Daniel Construction Co. of Greenville, S. C. and Birmingham, Ala., had more than half completed work on the new two-story addition to the Chiquola Mills weave room. Three-foot, load-bearing brick walls have been erected to carry the timber structure which duplicates the old mill's construction. Sufficient strength has been provided to carry the mill up to the full five-story height if desired. This $100,000 project will provide 17,000 square feet for 150 looms. This addition will provide extra capacity for the company's present line of print cloths, sheetings and other cotton fabrics.

GREENVILLE, S. C.—It has been reported that the $50,000 re-roofing project for Brandon Mills Corp. in Greenville has been completed by Daniel Construction Co., general contractors for the project.

ANDERSON, S. C.—A 17,000 foot warehouse addition has just been completed by Daniel Construction Co., of Greenville, S. C., for Haynsworth Mills. The warehouse has been designed to permit additional manufacturing space when desired, and complete facilities have been provided for air conditioning and humidification. In addition to the warehouse facilities, this $100,000 project included new air conditioning facilities for the entire mill. This entire project was completed about the first of January and is now in operation.

For The Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Lubricant Additive

A revolutionary lubricating additive, which is said to prolong the life and greatly increase the efficiency of electric motors as well as gears, bearings and all moving machinery parts, is currently being made available by Power Ball Oil Co., Inc., of Columbia, S. C. Called Power Ball Friction-Proof Oil, the new additive is said to boost instantly the lubricity and performance life of any oil, grease or lubricating compound to which it is added.

Factory sales and service manager in the states of North Carolina, South Carolina, Georgia, Alabama and Virginia is Arthur D. Wade of 2505B McClintock Road, Charlotte, N. C., to which textile inquiries should be directed. Supplies of Power Ball are currently maintained by Seabrook Transmission Co. of Anderson for South Carolina accounts; McCain and McGee of Statesville Road, Charlotte, for western and Piedmont North Carolina; and Transmission Supplies Inc., Greensboro, N. C., for eastern North Carolina. The president of Power Ball Oil Co., Jerome D. Shanman, has his headquarters at 911 Huger Street, Columbia, and the firm operates its own refinery at Tenafly, N. J.

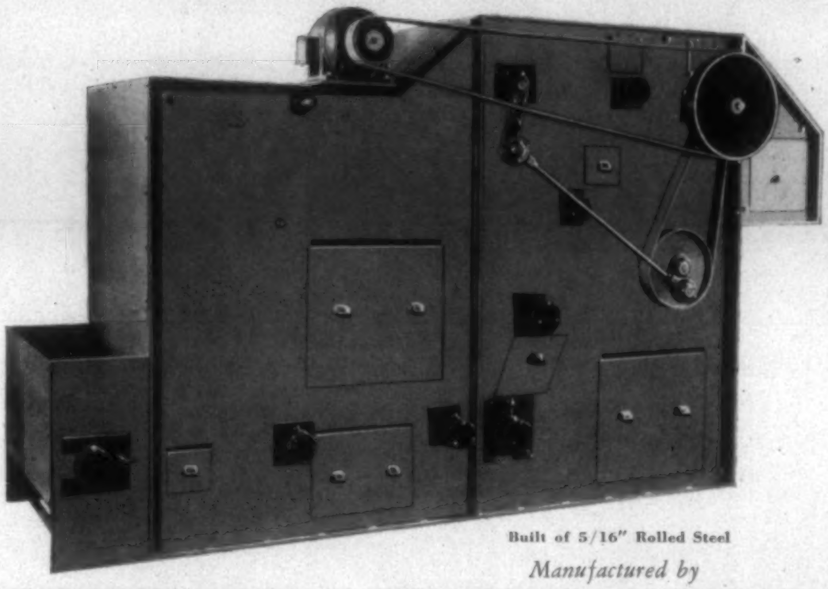
Additional outstanding features of the versatile oil bracer are its excellent rustproofing, detergent and penetrating properties, and, according to the manufacturers, it contains no soap, chlorine, graphite or sulphur. It is described as completely noncorrosive and non-acid forming, and injurious to neither ferrous nor non-ferrous metals.

Company engineers state that the high lubricating qualities of this unique, patented chemical compound can save impressive amounts of money annually in textile plants through increase in machine productivity, reduction in breakdowns, lowered maintenance costs and reduced power consumption. If properly used, advises the manufacturer, the additive can reduce the average plant's electric power bill by five to 18 per cent. These savings are possible because the product is said to increase horsepower yield by reducing wasteful machine friction.

When used in ratio of one part Power Ball to ten parts lubricant, it forms a microscopic but exceptionally tough lubricating film which penetrates into the pores of metal and protects the surface from corrosion as well as scuffing and scoring. Because of its remarkable penetrating power, Power Ball can easily free badly rusted nuts and bolts, shafts and other "frozen" machine parts, says the manufacturer. In respect to detergency, the additive dissolves all carbon, gum and sludge and holds such foreign deposits in suspension indefinitely.

At present, 130 textile plants (120 spin-

You get MAXIMUM RESULTS with the New, Improved No. 15
CLEANING and BLENDING FEEDER



Built of 5/16" Rolled Steel

HERE IS A MACHINE AS NEAR PERFECT AS ENGINEERING SKILL CAN MAKE IT

It is dust proof, all ball bearings, each housed in a special dust proof housing, each easily accessible for greasing which is only necessary about every six months.

Each machine fully equipped with Sargent or other comb, gridbar cleaners, dust pans for removing dirt, automatic feed control and other features that make this the most perfect hopper on the market. Certain changes may be made to meet individual preferences. Signal lights and suction fan optional.

Early delivery on a limited number of machines

Full details on request—No obligation

Specifications:
Height 6' 0"; Length 10' 5"; Width 3' 1½"; Motor—1 HP, 1200 R.P.M. Textile Motor.

Manufactured by

GASTONIA TEXTILE MACHINERY CO.
GASTONIA, NORTH CAROLINA

LOOM REEDS

Finest Quality — For weaving every fabric

Specializing in STAINLESS STEEL REEDS

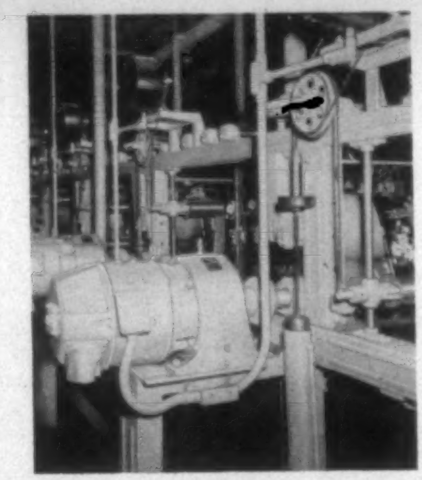
also CHROMIUM PLATING

Diamond Hard — Velvet Smooth

GREENSBORO LOOM REED COMPANY, INC.
PHONE 5678 **GREENSBORO, NORTH CAROLINA**

ning, weaving and finishing and ten knitting) are employing Power Ball Friction-Proof Oil in their manufacturing operations. It is being utilized on cards (licker-ins and comb boxes), spinning frames, twisters, looms, and dyeing and finishing ranges. It also finds use on motors of all types, air compressors, winches, generators, elevators, intra-plant materials handling trucks and cutting tools.

Hunter Compartment Washer



James Hunter Machine Co. announces the addition to its complete line of wet finishing and drying equipment, a new compartment type open soaper or washer. The machine is installed at the United States Finishing Co.'s main plant in Norwich, Conn., and has been operating on a production basis for the past six months. The machine was designed as the result of several conferences between the engineering department and the finishing department of United States Finishing Co., and the development engineering department of the James Hunter Machine Co. The net result of these conferences was the installation of a compartment washer embodying practically every feature and improvement practical operating personnel had desired for many years. The machine is brand-new from the ground up, the company states, and was designed with only one idea in mind, that being the manufacture of a high-speed, low-cost productive tool.

The cloth is fed to the machine through a set of Mecco guides and draw rolls to the first bowl. It progresses through vertical passes over stainless steel top and bottom idler rolls, then over a curved rubber expander to the main nip rolls. These can be furnished with either three or five-ton pressure. The bottom roll is of centrifugally cast stainless steel, and the top roll is rubber covered to any density required by the mill. These main squeeze rolls, as well as the idler rolls, are rigidly supported in a rugged cast iron frame, which is entirely independent from the stainless steel bowl itself. Both top and bottom bearings of the squeeze rolls are so designed that either roll may be removed without removing the other. The bottom idler rolls are held independently of the stainless steel bowl, and no part or parts which must be aligned are attached to the tub itself. The tanks are fabricated from type No. 316 S.M.O. stainless steel, and all corners and bottoms are rounded for ease in cleaning. A skimmer trough is furnished in each tank to clear away sludge or other foreign matter which is removed from the cloth. The bottom idler rolls in the first two compartments are solid stainless steel tubes, and in the balance of the machine are specially constructed reels. These reels are made from six ⅝-inch diameter stainless steel rods and agitate the cloth, which loosens gums and increases the scouring efficiency.

Pressure on the main rolls is supplied through Stabiliflo motors the control of which is located in the casting which supports the main rool bearings. The final squeeze is accomplished through a heavy set of Hunter Model G pneumatically controlled 18-inch diameter squeeze rolls, which operate from ten to 15 tons pressure. The cloth then goes through a compensating gate and is delivered to a set of 40 Unistel dry cans. These cans, which are manufactured by the Unistel Textile Corp. of Port Chester, N. Y., are 23 inches in diameter, and operate under 35 to 50 pounds pressure.

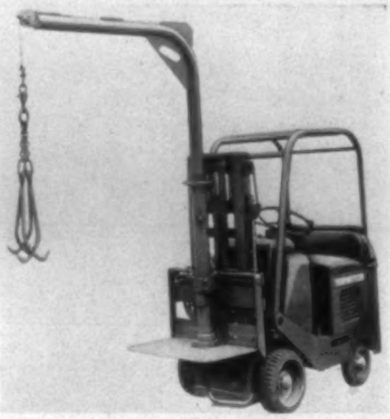
At the time that this soaper was installed, the mill management hoped to increase the productive efficiency of the soaping range by approximately 50 per cent. Now, after six months of operation, they claim a 100 per cent increase and are running the machine from 90 yards to 125 yards per minute on a complete range of fabric varying from 80-square percale to 118 dobby. When the machine is being run for soaping after aging or developing and oxidizing the colors used in the printing process, the first two bowls are filled with chrome acidic oxidizing bath to perform the initial function of developing. After these two bowls come two water rinses, then four soap bowls and two final rinse bowls. The temperature of the water is approximately 180° in all bowls. Water flow as well as addition of acid and soap can be entirely automatic. When the machine is being used for scouring rather than soaping, seven to eight bowls are used for soap and soda, and two to three bowls for rinse bowls.

The installation of this modern compartment washer and high-pressure cans is part of the United States Finishing Co.'s program for complete modernization of plant equipment.

New Montague Co. Office

B. L. Montague Co., Inc., of Sumter, S. C., recently opened a new office in Greenville, S. C. This new establishment is for the specific purpose of serving the Piedmont area on projects requiring steel fabrication as well as offering a complete line of textile and industrial machinery and supplies. Montague's new Greenville office will be in charge of M. D. Chase. Mr. Chase is equipped to serve the textile industry, having had over 20 years experience in the textile mill supply field. He will be traveling throughout the entire Piedmont area and can be reached through the Greenville office by telephoning Greenville 5-2058. Also on full-time duty in Greenville will be a competent draftsman to better serve contractors in the Piedmont area where steel estimates are required. The new Greenville office of B. L. Montague Co., Inc., is located at 305 East McBee Avenue.

Multi-Purpose Cotton Truck



A versatile materials handling development of Towmotor Corp., Cleveland, Ohio, is a three-in-one unit that can be used with a Towmotor cotton bale stacker, hydraulic bale clamp, or standard forks. Simplified attachment to the carriage of a compact Model LT-40 Towmotor fork lift truck and quick-detachable couplings in the hydraulic lines make these three cotton handling devices interchangeable in a few minutes time, the firm states. The unit is expressly engineered for easy maneuvering in box cars and congested areas, and for rapid stacking and "breaking out." The cotton bale stacker and a pair of pallet forks are standard equipment with the cotton truck; the stacker pivots a full 180 degrees, and includes a removable platform for added convenience in breaking out bales from storage.

Barnes New York Office

N. M. Mitchell, president of Barnes Textile Associates, Inc., with headquarters in Boston and a branch office in Spartanburg, S. C., announces that a New York office has now been opened with David P. Canavan in charge. Until recently Mr. Canavan was vice-president of Harry E. Stocker Associates. He will now head up the new Methods and Materials Handling Division of Barnes Textile Associates, Inc., at 522 Fifth Avenue, New York.

It is expected that this new division will be well received by the textile industry, in view of the expanding interest and need for engineering guidance in the methods and materials handling field. Inevitable shortages of manpower, and constantly rising labor rates, are forcing textile mill executives to consider all possible means for conserving labor and holding down costs. According to Mr. Mitchell, the results of methods and materials handling studies have proved to be a prime source for the development of increasing productiviy and reducing costs in every phase of mill operation.

Another item of importance to mill executives is the expansion of the Barnes executive service for the textile industry. Although the service has recently been developed to the point where it is a major activity, it has existed for several years in

magno·tronic

DUAL SILVER POINT — FULLY AUTOMATIC

FLUORESCENT STARTERS

—completely eliminate annoying blinking and flickering of dead fluorescent lamps!

GUARANTEED — FOR ONE YEAR!

This is a glow switch condenserless precision starter equipped with automatic thermal relay circuit breaker. The relay automatically removes the lamp from the circuit electrically when the lamp becomes deactivated and automatically resets upon interruption of the lamp circuit.

SIMPLIFIES — Replacement of defective lamp automatically recycles starter circuit. No buttons to push — no replacement of starter.

REDUCES COST — Magno-Tronic starters provide exact timing of electrode heating, preventing excessive loss of emission material, thus assuring maximum lamp life.

VERSATILE — Built to operate efficiently over an extended voltage and temperature range with absolute dependability.

SP-15-20 For use with 15 or 20 watt lamps.

SP-30-40 For use with 30 or 40 watt lamps.

SP-85-100 For use with 100 watt lamps.

Manufactured under
U. S. PATENTS

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2159837	2333694
2339307	2341520
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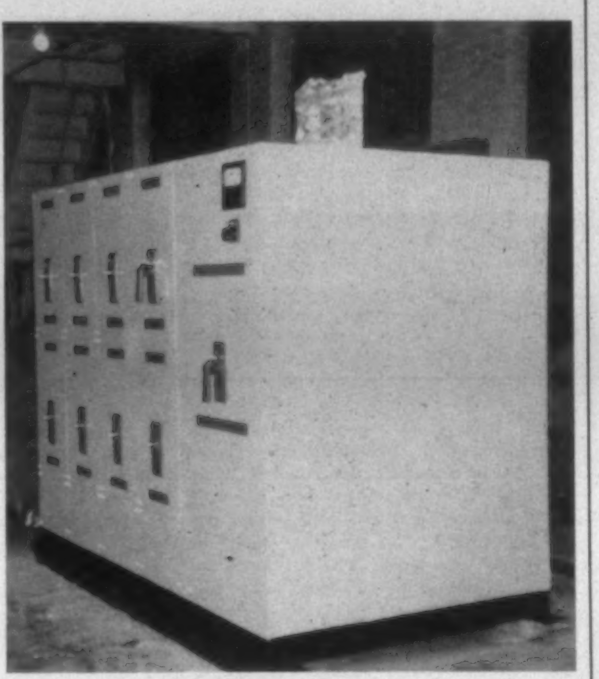
Other Patents Pending

INDUSTRIAL ELECTRONICS CORP.
80 BANK STREET, NEWARK 2, N. J.



New switchboard built by Southern Electric Service Co. for installation at Bladenboro (N. C.) Cotton Mills.

Southern Electric Service Co.

Charlotte • Greensboro • Spartanburg • Greenville

Nutting Floor Trucks, Rubber Wheels, Casters
Barrett Lift-Trucks, Skids, Portable Elevators
Elwell-Parker Electric Trucks and Tractors

Fig. 304

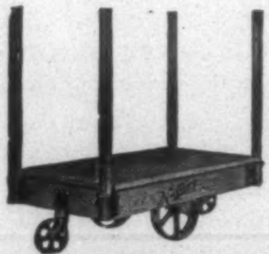


Fig. 11

Fig. 64-15

DESIGN AND APPLICATION ENGINEERING

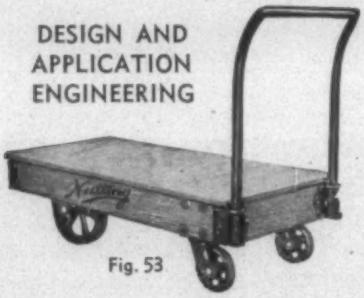


Fig. 53

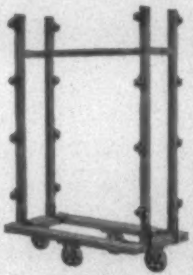
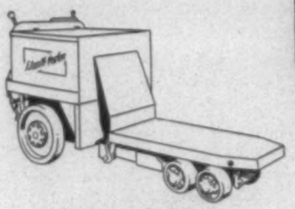


Fig. 310

INDUSTRIAL TRUCKS FOR EVERY REQUIREMENT!


ELWELL-PARKER POWER TRUCKS

ENGINEERING SALES COMPANY
S.R. & V.G. BROOKSHIRE
TEL·5026 CHARLOTTE, N.C.
WE SELL NOTHING BUT GUARANTEED EQUIPMENT

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Phone 2-5026

an informal way. Barnes men of wide experience are made available for whatever length of time may be required to fulfill a particular assignment. This can be a matter of a few days, a few weeks, or a few months. The service covers every type of management, and the executives available under the plan are specialists in their respective fields.

Manual On Employee Feeding

Employee Feeding, a manual of policies and procedures by John W. Stokes, has recently been published by Edmund S. Whitten, Inc., 216 Tremont Street, Boston 16, Mass. This 92-page manual covers policies and procedures for setting up and operating an efficient employee feeding facility. It is designed for industrial plants, insurance companies, banks, department stores, hospitals, colleges, schools and other institutions undertaking employee feeding for the first time, or desiring to check their current operations for improvements and economies. *Employee Feeding* is arranged to be of service to top executives and cafeteria managers alike; and its material may be applied to defense and wartime emergency feeding requirements as well as to ordinary peacetime conditions.

The main sections in this practical book by Mr. Stokes include: the food organization, location, equipment, purchasing, receiving, storage, food preparation, cooking, menu-making, sanitation, food cost control, labor cost control, accounting records and statements, food trucks and other services, developing patronage and sales volume, care of equipment, and preventive maintenance. It also includes 27 charts, floor plans and typical forms, and other supplementary material which make it a practical guide in day to day operations or when orienting new restaurant employees to their duties.

John W. Stokes, management consultant and author of *Employee Feeding*, for several years operated a well known system of restaurants and was president of the Massachusetts Restaurant Association. He is also a lecturer at Boston University on restaurant management. Eminently qualified to prepare this practical guide for organizing and operating profitable and efficient restaurants for employees, Mr. Stokes believes it should prove of unusual value at this time due to the tremendous step-up in defense work with its increased numbers of employees and practically round-the-clock feeding problems.

Book On Dust Control

Detailed selection, operation, and maintenance data for the plant engineer responsible for dust control is contained in a 50-page, digest-size book, *Industrial Dust Control Through Exhaust Systems*, offered by the Pangborn Corp., Hagerstown, Md. Liberally illustrated with 15 photographs and ten line drwings, the book treats, in three major sections, (1) exhaust hoods and piping systems, (2) dust collecting equipment, and (3) exhausters and drives.

Introductory chapters list six basic methods of accomplishing dust control; give seven reasons why improperly planned dust collection installations do not fully perform their function; tell why experienced engineering skill should be applied to the dust collection problem; and analyze with text and line drawings the three basic elements of dust control exhaust systems.

The chapter on exhaust hoods and piping systems discusses: (1) control of air movements, (2) recommended hood and enclosure design and arrangement, (3) exhaust air velocity and volume, and (4) eight rules for installing industrial exhaust system piping.

A 16-page illustrated section on dust collecting equipment gives seven factors which influence its installation. Then follows descriptive and application information on the following types of dust collecting equipment: (1) settling chamber, (2) centrifugal collector, (3) baffle type collector, (4) fan type centrifugal separator, (5) wet or washer type collector, (6) electrical precipitator, and (7) cloth type filter. Included in this chapter are data on continuous and intermittent service, spark arresting and collector hopper.

The chapter on the exhauster and drive tells how to determine exhauster capacity by considering the total air volume to be handled and the total air flow resistance of the system. Six components comprising the total air resistance are given. Types of exhausters, drive recommendations, and exhauster and motor foundation and housing requirements are discussed in this section.

A final eight-page chapter is devoted to exhaust system operation and maintenance. In this chapter are given methods of testing and evaluating exhaust system effectiveness; recommendations for locating indicating instruments desirable for making periodic check-ups; and 17 steps to follow when making routine inspections.

Copies of *Industrial Dust Control Through Exhaust Systems* may be obtained free of charge from the Pangborn Corp., Hagerstown, Md.

Cloth Folding Machine

Formed with the purpose of building an improved cloth folding machine and equipped to produce these machines to the customers specifications, the Hall & Jansson Co. of Worcester, Mass., has recently made delivery of the first cloth folder ever produced having an automatically air operated table, with motor drive and push-button control to return table to its starting position. Mr. Hall has specialized in design of cloth folders for about 35 years and Mr. Jansson has been associated with him for about 20 years. Plant engineers, purchasing agents, production engineers are invited to make inquiry to Hall & Jansson Co., 177 Highland Street, Worcester, Mass.

Barreled Sunlight Paint Co.

The name of U. S. Gutta Percha Paint Co. of Providence, R. I., has been changed to the Barreled Sunlight Paint Co. In making the announcement, Wilbur L. Rice, president and treasurer of the company, pointed out that "Barreled Sunlight," the registered trade name of the various interior and exterior paints and enamels manufac-

FEBRUARY • 1951

CARD CLOTHING NEWS

and views

WRITTEN MONTHLY BY E. A. SNAPE, JR., PRESIDENT **Benjamin Booth Company** PHILA. PA.

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Solve Your Carding Problems!

The story of STRIP-O-MATIC is as simple as that: its revolutionary design enables you to solve your carding problems!

STRIP-O-MATIC cards better, at lower cost to you, and in addition has so many PLUS features that users follow their first order with "repeats."

Today, with our Country in a State of Emergency, it is doubly important that you secure the very best production possible at the lowest cost. At no time could STRIP-O-MATIC be needed more than at the present, and we are indeed happy to be able to supply you with the amount you need.

We have curtailed our export business, thereby conserving our allotment of wire, foundation and leather to assure you of an available supply of the best card clothing possible. We owe this to you, just as you owe to your customers the best product you can produce; and which you WILL produce insofar as STRIP-O-MATIC can help you.

So—come to us with your carding problems and let us show you how ably STRIP-O-MATIC will solve them.

*Reg. in U. S. Pat. Off.

Sincerely,
E. A. Snape, Jr.,
President,

Benjamin Booth Company
Allegheny Ave. and Janney St.,
Philadelphia, Pa.

Representative
OLIVER D. LANDIS, INC.
718 Queens Road Charlotte 7, N. C.
Exclusive Sales Agent (Cotton Division) for Virginia, North Carolina, South Carolina

tured by the company, was so generally known that it would be far more advantageous to have the company known as the Barreled Sunlight Paint Co. In his announcement he made it clear that the change was in name only and in no way represented a change in either the ownership or management of the company. The same family ownership which has guided the management of the company since its foundation in 1886 continues with the following officers: Wilbur L. Rice, president and treasurer; Wayland W. Rice, vice-president in charge of operations; Howard F. Eastwood, vice-president and secretary, and Alexander S. West, general sales agent.

Mobilift Tier-Master

A new Mobilift Tier-Master fork lift truck with telescoping uprights low enough to enter a motor truck van body, yet with a lift that will tier materials three pallets high, is announced as being in production by Mobilift Corp. in Portland, Ore. This versatile new model, according to the manufacturer, is only 72 inches high with the mast lowered but will lift 117 inches from floor-to-forks. The over-all height of the mast extended is 142 inches. The Tier-Master is designed to tier three pallets high and still easily move in and out of trucks, through low doors and other restricted clearance areas without transferring loads from one fork truck to another. With a fork lift truck of this design, materials handling can be greatly speeded up in operations where loaded pallets are tiered three high but still must be moved in and out of truck bodies or through restricted clearance areas.

The Mobilift roller lift mechanism allows unobstructed view between the uprights and lifts at a speed of more than 45 feet per minute. This makes it possible for the operator to have full visibility through the uprights from the lowest to the highest position he can tier to the full 117 inches in a minimum of time. Like all Mobilift models, the new Tier-Master has the famous Lev-R-Matic drive controls which allow forward or back operation at the push or pull of a single lever without shifting gears. All three control levers are conveniently grouped for finger-tip, right hand operation.

The Tier-Master is a stand-up type, 2,000-pound capacity fork lift truck with an outside turning radius of 57 inches and a zero inside turning radius. The new model is powered by a three cylinder air-cooled, gas-operated Mobilift engine.

ElectroniK Recorder

An electronic recorder for accurately and quickly measuring temperature of the rotor in large electric generators has been developed by Minneapolis-Honeywell Regulator Co. The ElectroniK has been designed to provide a better and more economical instrument to assist operators in avoiding overloads, according to Charles W. Bowden, central stations industry manager of the company's Brown Instruments Division. In addition, the instrument furnishes a 12-inch strip chart record which can be used as a guide for gradually cooling a generator, Bowden said. The recorder has a range of 0 to 150° C., a limit error of 1.5° C., a dead zone of 0.3° C., and a pen speed of 1.4 minutes full scale. Its range of rotor winding resistance is 0.1 to 4.0 ohms and it has a dielectric test of 1,500 volt rms for one minute. In designing the new instrument special consideration was given to users who, generating large volumes of their own power, want maximum safety and dependability for peak capacity operation. The recorder is made as a special product with deliveries in about 90 to 120 days from receipt of orders.

New U. S. Testing Co. Lab

As a further service to mill buyers, exporters, cotton merchants and others, the United States Testing Co., Inc., has established a new cotton fiber testing laboratory in the Cotton Exchange Building in Dallas, Tex. This new laboratory is maintained at standard atmospheric conditions. The equipment includes: the latest type Pressley Testers for fiber strength, the Fibrograph for fiber length uniformity, the Micronaire for fiber fineness, and microscopic equipment for cell wall thickness or maturity. The laboratory is staffed with experienced technical personnel.

The new Dallas laboratory is the first independent commercial cotton fiber testing laboratory in Texas which is the country's largest cotton growing and exporting state. It is the second cotton fiber laboratory to be established by the United States Testing Co., the first laboratory having been established in Memphis in 1949.

The operation of these cotton fiber laboratories in the country's two leading spot cotton markets greatly facilitates the use of cotton fiber tests in the merchandising and utilization of cotton and is particularly important at a time when production of yarns and fabrics against government specifications requires careful selection of cotton having specific fiber properties.

Brush Plant Expands

Industrial Brush Co., Inc., Little Falls, N. J., has just completed additions to its plant that triple floor space and make room for installation of new equipment. W. F. Enchelmaier, president of the company, originated and developed the use of its present all-metal core cylinder brushes as a result of more than 26 years of experience in the designing and manufacturing of industrial brushes. The present expansion is

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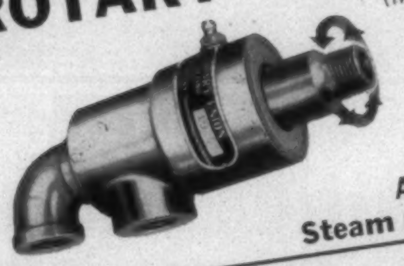

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Ball bearing construction permits high speeds and prevents stretching of warps. Other exclusive features prevent operating failures and materially reduce downtime.

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due to rapidly growing trend toward elimination of wooden cores in cylinder brushes.

Morningstar, Nicol Bulletin

Recently made available from Morningstar, Nicol, Inc., is a new four-page bulletin, in convenient form for loose-leaf filing, which is said to reveal heretofore unknown facts regarding the advantages, and properties of potato starch and techniques applicable to modern textile processing. Copies of this bulletin may be obtained without obligation by addressing requests to Morningstar, Nicol, Inc., 630 West 51st Street, New York 19, N. Y. The Morningstar organization, established in 1851, celebrates this year its 100th year of service to the textile industry. Founded by Charles Morningstar, the company was the first to make potato starch commercially and is considered the leader in this field as manufacturers and distributors of potato starch and dextrines with plants at Houlton and Mars Hill, Me., Twin Falls, Idaho, and Hawthorne, N. J.

R.C.A. Metal Detector

Eriez Mfg. Co., Erie, Pa., sole domestic and Canadian distributor for the R.C.A. electronic metal detector, announced recently that further mechanical and electronic improvements have been made on this inspection equipment. The R.C.A. metal detector is a scientifically designed automatic inspector which warns of the presence of all magnetic or non-magnetic metals or alloys regardless of their depth in the material. Particles as small as 39-thousandths of an inch in diameter have been detected. Units have been in use for more than six years.

Improvements have been made on the main tie-bolts between the two heads of the unit. They are now made of steel instead of brass to provide greater strength and more rigidity, resulting in improved stability. Dust-covers over the balance control access holes will now open wider. They will also be provided with tabs to assist in opening, making for easier access to the balance controls. Further mechanical improvements are: the orientation of screw driver slots so that the position of the control is more easily determined. The terminal for the external ground connection will now be permanently fastened.

Provisions for air circulation around the chassis have been altered to guard against the possibility of nuts falling through the ventilating openings. An electronic change in the balance meter circuit has been made to eliminate the high voltage connections that were above the chassis. Oscillator coils are now accurately marked and matched, affording easier initial balancing and greater stability during service.

Further electronic changes have also been made in the circuit of the cathode delay

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capacitor. The protective relay on the oscillator chassis has been re-located; an additional frequency by-pass has been provided on the receiver chassis; a pickup coil of new design has been introduced to reduce any capacitive effect from products; and a new pin-jack on the receiver chassis will allow for the direct measurement of unbalanced voltages.

Brown Moist-O-Graph

The Brown electronic Moist-O-Graph for regain control on multi-cylinder rayon slashers is fully described in Instrumental Data Sheet No. 8.3-37, currently available from Brown Instruments Division, Minneapolis-Honeywell Regulator Co., Wayne and Roberts Avenues, Philadelphia, Pa. The firm states that for many years there has been a definite need in the textile industry for a better instrument for measuring and controlling moisture regain on rayon and synthetic warp yarns. This gap in the field of moisture measurement, it claims, has been closed with the release of the Brown electronic Moist-O-Graph.

New Loom Aids Agent

William J. Moore, manufacturers agent of Greenville, S. C., announces that his firm has been made agent in North and South Carolina for Loom Aids, Inc., division of Medgentra, Ltd., (U.S.A.), Inc. The Greenville firm also represents Edward H. Best & Co., Redman Card Clothing Co., Chapman Electric Neutralizer Co., Walter L. Parker Co., Waukesha Foundry Co. and Chas. A. Schieren Belting Co.

General Dyestuff Circulars

General Dyestuff Corp., 435 Hudson Street, New York 14, N. Y., recently released the following new circulars: G-646, Celliton Discharge Blue 5GA; G-651, Algosol Golden Orange IRR-CF; G-658, Algosol Gray IHL-CF; G-659, Igepal CA Extra High Conc.; G-660, Fastusol Brown 3RL-CF; G-661, Celliton Fast Red GGA Extra Conc. CF; G-662, Celliton Blue BB Extra Conc. CF; G-666, Celliton Fast Red GGA Extra Conc. CF for printing; G-670, Rhodamine B Extra S; and G-672, Glyecine A.

Mason-Neilan Branch Moves

The Atlanta, Ga., branch office of Mason-Neilan Regulator Co. Feb. 1 moved into new quarters at 805 Peachtree Street, N.E., Atlanta. The office is located in Room 457 at the new address and the telephone number is Vernon 2782.

New Reeves Bulletin

An attractive new 12-page bulletin, G-509, which describes the basic operating principle of the Reeves variable speed drives and contains representative rating tables and dimension drawings, is being offered by the Reeves Pulley Co., Columbus, Ind. Reeves, manufacturer of more than 300,000 variable speed drives, offers the only complete line of variable speed equipment. Capacities range from one-fourth to 87 horsepower with stepless speed changes within ratios from 2:1 to 16:1. The new bulletin covers, in condensed form, the three basic Reeves units—variable speed transmission, vari-speed motodrive, vari-speed motor pulley—and a wide variety of manual and automatic controls for use with them.

New Holdsworth Plant

Holdsworth Gill Screw Co., Inc., recently moved into its new and enlarged plant at 55 Sabin Street, Pawtucket, R. I. The firm states that a faster parts service will be available to customers directly from this new plant. Sole sales agent for the firm is Atkinson, Haserick & Co., 211 Congress Street, Boston 6, Mass.

Fafnir Branch Is Moved

Fafnir Bearing Co. of New Britain, Conn., announces the recent removal to larger, more modern quarters of its Charlotte branch office and warehouse, to 119 West 29th Street, Charlotte 6, N. C.

Industrial Electric Co., 617 Gillespie Street, Fayetteville, N. C., has been named a dealer for Allis-Chalmers motors, controls, pumps, transformers and Texrope drive equipment in 17 central and southeastern North Carolina counties and in five northeastern South Carolina counties. E. L. Plunkett is manager of the firm, which was established last July.

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May Put Narrow Looms On Heavy Webbing

Narrow fabric looms now producing civilian goods may soon be converted to the manufacture of heavy webbing, it was revealed in Washington Feb. 6 following the first meeting of National Production Authority officials with members of the narrow fabrics industry advisory committee. The advisory committee also recommended that the N.P.A. utilize looms which are now idle in production of heavy webbing.

The diversity of production methods among the various segments of the industry created a problem as to the issuance of an order for this industry, comparable to other directives put out by N.P.A. The manufacturers generally agreed that some type of directive providing an even distribution of defense rated orders was desirable, but there were apparently no concrete suggestions offered at the meeting.

N.P.A. promised to alleviate one of the primary problems, namely the industry's inability to get sufficient cotton and rayon yarn even with priority rated orders. This situation was created by the fact that present N.P.A. orders state producers of carded cotton sales yarn and high tenacity rayon yarn may reject defense orders if shipments under them would exceed ten per cent of their scheduled monthly production.

Cotton Clinic Probes Cleaning Problem

Intensified research effort is urgently needed if cotton, the nation's number one fiber, is to meet its essential obligations in the emergency years ahead, conferees at the second Cotton Research Clinic sponsored by the National Cotton Council concluded after their three-day meeting in Pinehurst, N. C., Feb. 7-9.

After reviewing special military cotton needs, appraising mill processing problems and scrutinizing cleaning methods and progress made in testing various fiber properties, the 119 top textile scientists in attendance representing 17 states and Canada, agreed further emphasis is needed on manufacturing and production problems in order to bolster the nation's mobilization effort.

The clinic conferees carefully examined problems involved in cleaning cotton in the light of the increased amount of trash, leaf, etc., resulting from mechanical harvesting. Whereas three years ago about five per cent of cotton was picked mechanically, about 15 per cent of the 1950 crop was so harvested. With an all-out drive now on to bring in 16,000,000 bales or better in 1951 and acute labor shortages already developing, ever greater emphasis will have to be placed on increased mechanization. Thus a serious cleaning problem is posed for mills which must now make every pound count in processing the needed quantities and qualities of military and urgent civilian cotton goods.

In evaluating cotton cleaning in mills, Robert O. Simmons, engineer at Pepperell Mfg. Co., Lindale, Ga., reported that exhaustive experiments with standard cleaning equipment in mills showed that little progress has been made in the past two decades and concluded that present equipment cannot cope with the cleaning problem. He said basic new developments were needed to obtain the necessary quality and pointed out that inadequate machinery presently used as cleaning equipment places an extra cleaning load on the card which actually is designed primarily to separate fibers. The card, a main step in processing cotton, acts efficiently as a cleaner of hand picked cotton but can't operate efficiently on trashy cotton. Therefore, in effect, the card has become a bottleneck in expanding cotton production to meet stepped-up requirements. Another clinic speaker, E. C. Gwaltney, vice-president of Saco-Lowell Shops, Biddeford, Me., described experiments with high-speed winding which he said hold real promise of easing the cleaning problem although the winding method is still only in the experimental stage. It was found that when speed of the yarn ran up to 1,800 yard per minute, tremendous amounts of trash and neps were removed from the yarn. "With a bright light on the bobbin," he said, "the motes being thrown off looked like hornets coming out of a nest." He reported mill men viewing the tests agreed that from one-half to three-quarters of pepper trash was removed from the yarn with no loss of strength.

Conferees also reviewed research strides made in developing cotton products for military uses. A report prepared by Dr. S. J. Kennedy, research director, textile clothing and footwear section of the Quartermaster Corps, told how even greater research efforts must be made to give greater protection to troops in training and combat under all types of climatic conditions. His report pointed out that present shortages of certain military-type textiles, coupled with the vastly accelerated mobilization plans of the nation make it imperative that fabrics be designed for maximum serviceability. Greater conservation is needed too, he said. In this connection, the Quartermaster laboratory has already been successful in designing cotton fabrics in varying weave, texture and yarn count and subjecting these to rigid field and laboratory testing, with the result that great improvements have been made. For example, tests showed that cotton sateen weaves, cut into garments with the filling side out, were substantially better than standard herringbone twill used in World War II. As a result sateen has replaced twill. It was reported further studies are under way to develop fabrics of multiple properties combining fabric structures to provide wear, water and tear resistance. Improvements in high strength cottons to provide these properties present real possibilities, Dr. Kennedy's report stated.

Those attending clinic sessions also heard emphasis placed on the important influence of fineness and maturity of cotton fiber on the properties of the yarns and fabrics needed for military and essential civilian uses. Experiments were described in which fibers were cut to eliminate all differences except fineness, thus allowing direct measurement of the effect of this property. Mill representatives at the clinic urged that these developments be carried further if the enormous demands for quality production are to be met.

Manual On Quality Control Of Materials

A new A.S.T.M. Manual on Quality Control of Materials, sponsored by Committee E-11 on quality control of materials, has been issued and takes the place of the widely used A.S.T.M. Manual on Presentation of Data. The new manual is organized in three parts. Part 1 essentially covers the presentation of data; Part 2 presents limits of uncertainty of an observed average; Part 3 explains the control chart method of analysis and methods for presentation of data.

Part 1 represents a revision of the main section of the former A.S.T.M. manual which it replaces. This section discusses the application of statistical methods, other problems of condensing the information contained in a single set of observations, and presenting essential information in a concise form. Special attention is given to types of data such as would be gathered by individuals or committees and presented to the society, with emphasis on the variability and the nature of frequency distributions of physical properties of materials.

Part 2 represents a revision of Supplement A of the old A.S.T.M. manual which it replaces. In this section is discussed the problem of presenting limits to indicate the uncertainty of the average of a unique sample of observations. In this part is suggested a form of presentation for use when needed in A.S.T.M. reports and publications; the restricted conditions under which this form is theoretically applied are given and the meaning of such limits is explained, and a table is given to permit ready calculation of 99 per cent, 95 per cent, and 90 per cent "confidence limits" for various sample sizes. Working rules are presented regarding the number of places to be retained in computation and presentation of average, standard deviations, and confidence limits. In this revision the generally accepted term "confidence limit" is introduced, and constants for computing 95 per cent confidence limits are added.

Part 3 presents formulas, tables and examples useful in applying the control chart method of analysis and presentation of data as mentioned above. This method requires that the data be obtained from several samples or that the data be capable of subdivision into sub-groups on the basis of relevant engineering information. The principles of this part are discussed largely in terms of the quality of materials and manufactured products.

The A.S.T.M. Manual on Quality Control of Materials (STP No. 15-C), 100 pages, in heavy paper cover, can be procured from the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pa., at $1.75 per copy.

Piedmont A.A.T.C.C. Unit Holds Parley

The Piedmont Section, American Association of Textile Chemists & Colorists, held its Winter meeting in Greenville, S. C., Feb. 3 and during the technical session members were told of the many uses in textile processing for polyphosphates and mechanical color gauging.

Arthur H. Razee, manager of chemical sales and service for Rumford (R. I.) Chemical Works, declared that properties of the polyphosphates make them effective wherever soap is used in wet processing. Polyphosphate efficiency as a detergent, emulsifier, dispersing agent and deflocculent were emphasized by Mr. Razee, especially in sequestering

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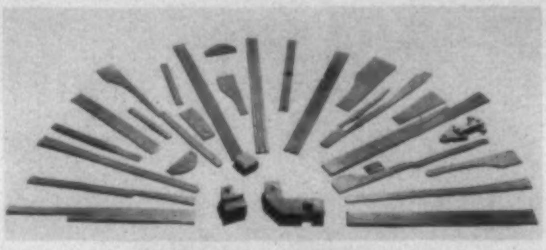

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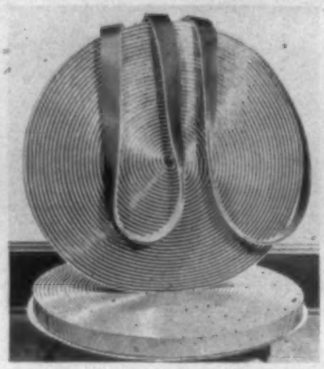

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calcium and magnesium and heavy metals and aiding even dispersion of dyes, starch, metal oxides and printing gums. He also pointed out that insoluble lime soaps and pectinates in emulsifying oils, waxes and finishes can be removed by polyphosphates.

Inaccuracies in color matching occasioned by such things as stray light and variations in photocell characteristics and illumination levels are eliminated by use of an instrument such as the PPG-IDL Color Eye, Dr. George P. Bentley, head of Instrument Development Laboratories, Needham Heights, Mass., pointed out. Fifty of the instruments are now in use, chiefly in textiles, it was stated. The instrument's diversity in measuring samples of dimensions from one-half inch minimum diameter, was noted. Comparative ease of operation was also pointed to, unskilled personnel being able to make routine measurements in a few minutes.

Georgia Executives To Meet March 24

The next carding-spinning discussion meeting of the Textile Operating Executives of Georgia will be held March 24 at Georgia Tech, Atlanta, it is announced by Robert W. Philip of Callaway Mills Co., secretary and treasurer of the group. The program for the meeting will be based on a carding-spinning questionnaire of 22 questions which was mailed to all members of the association Jan. 29.

Bonnar Made Vice-President Of A.A.T.C.C.

J. Robert Bonnar of General Dyestuff Corp., for many years director of research for the American Association of Textile Chemists and Colorists, last month became a national vice-president of the association. Mr. Bonnar's election was made known as ballot results were announced to the 175th council meeting of the organization in New York City. All other officers were re-elected.

C. Norris Rabold, Erwin Mills, Cooleemee, N. C., was re-elected president; George O. Linberg, Belle Chemical Co., Boston, vice-president; William R. Moorhouse, National Aniline Division, Allied Chemical & Dye Corp., treasurer, and Harold C. Chapin, secretary.

Leonard S. Little, of E. I. du Pont de Nemours & Co., originator of the association's executive committee on research some years ago, is taking over that post from Mr. Bonnar. William D. Appel, National Bureau of Standards, also was added to this committee. George H. Schuler, Du Pont, was named chairman of the council's publicity committee to succeed Paul J. Luck, Calco Chemical Division, American Cyanamid Co., who resigned this post because of his duties as New York chairman and in arranging the forthcoming convention there Oct. 17-19.

Beginning next year, the association will elect four regional vice-presidents from the South, West, New England and Central Atlantic areas, the council having agreed that all requirements for change of the constitution have been met.

The next meetings of the council and general research committees are to be held in Raleigh, N. C., April 20.

Full Production Called Industry's Goal

Full production of cotton textiles in 1951 and the utmost in co-operation with the military to provide needed fabrics are the principal current goals of the industry, W. Ray Bell, president of The Association of Cotton Textile Merchants of New York, stated at the annual meeting of the association Feb. 8 at its Worth Street offices, New York City.

Contrasting conditions with those obtaining just ten years ago, however, Mr. Bell expressed the opinion that, short of all-out war, the pressures on the market in 1951 should not be as great as then. He pointed to productive records of cotton goods mills, greater machine efficiency, the availability of greatly increased supplies of rayon and synthetic fabrics, and the fact that cotton does not have to be substituted for imported fibers and fabrics such as burlap, linen, and the like. All of these are evidence of a better over-all supply position in textiles. Increased military demand also is offset in the total yardage situation by decreased export trade in cotton goods.

At the meeting Saul F. Dribben of Cone Export & Commission Co., Inc., recently named to the new office of chairman of the board of the association, was re-elected to the board, and the following new directors were chosen for three year terms: Robert Amory of Springs Mills, Inc., John M. Reeves of Reeves Brothers, Inc., and J. W. Valentine & Co., Inc. Mr. Dribben submitted a report for the industry committee of which he is chairman, Alonzo F. Bonsal reported as an association delegate to the textile industry committee on foreign trade, Mr. Bell reported for Treasurer Ridley Watts, and John L. Severance reported as secretary of the association.

In commenting on the greater availability of textiles than at the outset of World War II, Mr. Bell noted that production of cotton textiles in 1951 was 1,400 million yards or 16.6 per cent larger than in 1949, showing a total of about 9,800 million linear yards. Rayon and other synthetic fabrics, he said, are supplying a billion yards a year more than prior to World War II. The sea lanes are open and cotton does not have to substitute for burlap, jute, silk, sisal and other hard fibers. Meantime although five per cent of the spindleage in 1941 has been dismantled, the larger proportions of new machinery in plants today probably more than balance this loss. Continuous production on a three-shift basis, five days a week and in many cases six, also is boosting production. For the final quarter of 1950, Mr. Bell said, production of cotton goods was averaging over 200 million linear yards weekly.

"Although demand in our primary markets," he said, "has continued unabated, these figures on over-all production would indicate that the civilian trades in American distribution have absorbed cotton goods at a rate equivalent to former high periods of inventory accumulation, in other words around 60 linear yards per capita. There is

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little doubt that much of this increased production has gone into surplus accumulation in the channels of trade, despite periods of protracted scare buying at the consumer level, especially in July and August of last year and January of this."

Referring to changed conditions where cotton is currently in short supply, in contrast with a decade ago when the government had a ten-million bale stockpile, Mr. Bell expressed hope of a bumper crop in the new 1951 season. "If we don't get it," he said, "textile difficulties will be greatly magnified.". Raw cotton costs he said are four times the rate of a decade ago and labor costs thrice the 1940 rate. Cotton goods exports for 1950, Mr. Bell noted, "declined some 300 million yards from the 1949 experience, a volume which undoubtedly would more than offset the total yardage shipments made during the year to military agencies."

Mr. Dribben in his report referred to current grave difficulties of the industry in interpreting and adjusting to the new general ceiling price regulation and its Supplement 1 covering military fabrics. Fundamental in the current market situation, he said, is the basic uncertainty as to raw material cost arising from the fact that the cotton futures exchanges have been closed since issuance of G.C.P.R. the night of Jan. 26.

Carbide & Carbon Fellowship Established

Carbide & Carbon Chemicals Division of Union Carbide & Carbon Corp. has established a participating fellowship at Textile Research Institute, it has been announced by Dr. John H. Dillon, director of research of the institute. This will be known as the Carbide & Carbon Chemicals Fellowship and the subject of the research will be a study of the basic triboelectric properties of textile fiber materials as they relate to the important problem of static generation in processing and service. William P. Riemen, who received his B.S. degree in physical chemistry from the University of Wisconsin in 1950, will undertake the work of the fellowship which will constitute his Ph.D. thesis research at the institute and Princeton University. Dr. Donald J. Montgomery, institute physicist, will be thesis advisor for the Carbide & Carbon Chemicals Fellowship.

The participating fellowship plan of the institute, recently announced, permits the fellowship donor to suggest a field of fundamental research to be undertaken by the graduate student supported by the fellowship. If this field of research is accepted by the institute as suitable in the light of its general program of long-range textile research, the participating fellowship is set up for a period of two years. The fellowship donation is $5,000 per year which covers the fellowship stipend, tuition, supervision, apparatus and laboratory overhead costs. All results of the research are freely publishable in the technical literature, as must be the case for a thesis assignment. The donor firm has the privilege of consultation with the participating fellow and his thesis advisor. No restrictions as to future employment are placed upon the participating fellow.

Silk And Rayon Print Promotion

A dual program to accelerate the effect of renewed public interest in silk and rayon printed fabrics has been launched by the newly-formed Silk & Rayon Print Institute. The short-range objective is to place increasing emphasis on new printed fabric styles and designs in publicity and promotion built around the 1951 American Spring Fashion collections. The long-range objective is to improve trade practices in design, fabricating, merchandising and distribution of printed fabrics, both as finished garments and in piece goods.

C. E. Murray, president of the institute, states that work already has been started on style and fashion publicity by Miss Eleanor Lambert who is retained by the institute to handle this specialized phase of the program. Basic research and recommendations for the long range phase of the program, together with its coordination, will be carried out by Ted Baldwin, Inc., public relations counsel. Mr. Baldwin's organization has begun the basic field research in the New York area.

New Model Automatic Loom Introduced

George Keighley, Ltd., of Burnsley, Lancashire, England, has introduced a new automatic loom, said to be extremely simple in design and operation, and containing many of the features of the firm's present Lancashire type non-automatic loom. A feature emphasized by the firm is the interchangeability of many of the parts of the new loom with its standard models. Of the bobbin changing type, the new loom is equipped in the conventional manner for underpick working, but the change and picking mechanism is designed so that an overpick arrangement can be fitted if preferred.

The weft battery takes about 24 six-inch pirns which are fed by gravity to the change point. Replenishment of the weft in the shuttle is by means of a down-thrusting hammer, which ejects the empty tube and inserts the new one. There is no loss of production during the change since this takes place while the loom is running at full speed.

Weft shortage indication is by means of a feeler at the starting side of the loom. The pirns are wound with the usual bunch, but when the remainder of the weft on the pirn is exhausted, the feeler, which contacts the weft through a slot in the shuttle box wall and corresponding slot in the shuttle, slides along the pirn tube and pushes a short connecting rod which passes through the normal side weft hammer into engagement with a lever at one end of the main transfer rod.

As a result of the ordinary movement of the weft hammer, the transfer rod is turned about its axis through a corresponding lever at the battery and slides a swivel block into lines with the striking bunter secured to the front of the sley. With the next movement of the sley the bunter and block come into contact and as a result a sharp downward stroke is given to the bobbin change hammer, which strikes the lowest of the pirns in the battery and knocks it down into position in the shuttle, ejecting the empty tube at the same time. The ejected pirn tubes are delivered into a receptacle below the sley.

The whole change takes place within one revolution of the crankshaft, which means that only one pick is inserted after the feeler has indicated an empty shuttle. As the pirns are built with bunches this eliminates the danger of this pick being made without weft. For certain types of yarns, or according to personal preference, an electrical weft feeler can be fitted to the loom.

Brought automatically into operation on the weft change is a weft cutting and thread holding mechanism. The weft is held between the cloth selvage and the empty shuttle and is severed at that point, the tail of weft from the selvage

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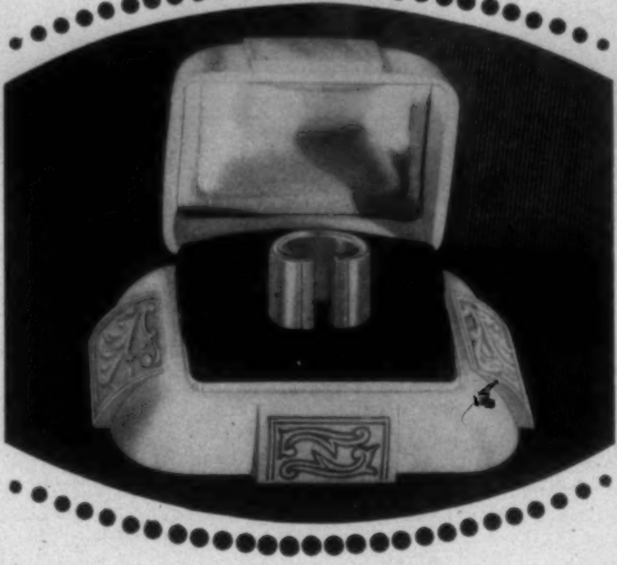

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being held until in the normal course it reaches the temples where it is severed by the ordinary temple cutter. In a similar way, the weft from the replenished shuttle is cut when it has moved up to the temples.

A mechanical swell is used to make certain that the positioning of the shuttle in the box is always exact—this being essential at the time when the pirn change takes place. The checking device is operated from the crank arms and puts the required pressure on the swell to position the shuttle accurately.

Chemical Found Usefully Reactive To Wool

According to British Patent 644,213, epichlorhydrin, which was first discovered by Bertholet in 1856, has recently been found usefully reactive toward wool, it was reported in a recent issue of the Wool Bureau's *Newsletter*. The *Newsletter* states: "By its use wool fiber can be given increased weight, a greater resistance to abrasion, and better washing fastness in the case of dyed wool. Possibty this reactivity is due to the chlorine of the epichlorhydrin.

"To improve wool according to this patent it is desirable to apply the epichlorhydrin from water solution under strictly controlled conditions. In general, it is recommended to treat the wool for one to two hours in a one-quarter per cent to one per cent solution at 175° to 200° F.

"The treatment can also be applied to wool which has been chlorinated to make it unshrinkable. The epichlorhydrin treatment can be carried out before or after dyeing, but in many cases the after-treatment takes away the bloom of the dyeing. It is best, where bright shades are required, to dye after the epichlorhydrin treatment. In the case of dull shades it is better to dye first, and then add the epichlorhydrin to the spent liquor—thus making the process simple and economical.

"It seems unlikely that this treatment involves a chlorination of the wool as chlorination frequently leads to shades of decreased wash fastness and a loss of weight of two to five per cent. The epichlorhydrin treatment improves the wash fastness and may increase the weight up to ten per cent, with a 30 per cent increase in abrasion resistance."

Q.M.G. Studies Uses For Coated Fabrics

At a special meeting of representatives of the Office of the Quartermaster General, the Philadelphia Quartermaster Depot and members of the Coated Fabrics Division of the Society of The Plastics Industry, Inc., Jan. 4 at the Commodore Hotel, New York City, immediate and future military requirements from this branch of the industry were discussed.

The principal activity of the society at a time like this, said William T. Cruse, executive vice-president of S.P.I., is to do everything within its power to promote and advance the rearmament program and to work diligently in behalf of national security. Because of this, he said, S.P.I. has taken steps to co-ordinate the plastics requirements of the Armed Forces within the production capacity of this industry.

In World War II, 21,000,000 raincoats and 9,000,000 ponchos were purchased by the Army, according to L. Boor, of the development laboratory, Philadelphia Quartermaster Depot. The large majority of these 30,000,000 rainwear items were coated with vinyl plastics. It was emphasized by Mr. Boor also that it is their policy to use to the best advantage the best available commercial materials on the market, and not to develop some super-duper special product for each application.

Research development work on the part of the Quartermaster Depot, in connection with the elimination of attack by living matter that feeds on the plasticizer, has progressed to the point where fungus growth can be stopped. However, where there is fungus, there is bacteria and the depot is now working on the elimination of this attack. As soon as the proper additive to the plasticizer has been perfected to prevent both bacteria and fungus attack, then the Quartermaster General will be in a position to write specifications for coated fabrics for products falling in this category.

It was explained by Mr. Boor that the irregular results received from the vinyl coated raincoats and ponchos during World War II were due to the degradation of this material by the lack of resistance of these materials to bacterial and fungal growth. There are five reasons, he said, for the degradation of materials: sunlight, heat, moisture, air and organisms (fungi, bacteria or anything that feeds on the plasticizers). As far as rainwear items for military purposes are concerned, problems presented by the first four have been overcome and the fifth is almost solved. In addition. it was disclosed by Mr. Boor that specifications are now being drawn for another all-plastic product, a vinyl coated nylon poncho.

Heating, Ventilating Show Termed Success

Three hundred and fifty exhibits at the tenth International Heating and Ventilating Exposition testified to the remarkable stature and wholesome outlook of an industry that is achieving new heights. The exposition, largest of its kind ever held, occupied all the space available in the Commercial Museum, Exhibition Hall and extended into the Convention Hall at Philadelphia, Pa., Jan. 22-26. It was managed by the International Exposition Co. under the auspices of the American Society of Heating and Ventilating Engineers, whose 57th annual meeting was held during the week.

The exposition was opened officially by Lester T. Avery of Cleveland, Ohio, president of the A.S.H.V.E., assisted by Lauren E. Seeley, first vice-president and now president. Assisting at the opening ceremonies also were Charles L. Todd, executive director of the Philadelphia Convention and Visitors Bureau, and Charles F. Roth, exposition manager.

Noteworthy features of the exposition were the large exhibits showing complete units, ready for installation, their excellence of design and attractive finish, and the educational values produced by the carefully planned displays. These were generally superior to the offerings at previous heating and ventilating expositions.

The exposition drew attendance from a wide area, with visitors registered from all parts of the United States and many foreign countries, mounting by the end of the exposition to a total of nearly 18,000. Members of the A.S.H.V.E., and architects, professional engineers and manufacturers from the many industries which depend on heating, ventilating and air conditioning equipment, were strongly in evidence throughout the week. An even larger body of visitors represented heating and ventilating contractors and dealers, many of the latter seeking to expand their lines to meet the increasing requirements introduced by the changing trends in manufacturing processes which employ heating, cooling and ventilating equipment, and also by advances in the construction industry, which affect heating and ventilating problems in many ways.

An optimistic outlook on sales for the industry is sustained by the orderly growth of demand based on the incidence of new industries, plant expansion required by established industries, continued demand for housing, exhibitors said. An underlying factor that many members of the industry are taking into their calculations seriously is the increasing acceptance of year around air conditioning; that is Summer cooling in Northern climates and Winter heating in Southern sections, even where extremes of weather are seldom experienced. Executives of industries and boards of directors are becoming more readily persuaded that investments in climate control pay dividends in more uniform and economical production. Managers of institutions, business establishments and commercial enterprises have learned that the public expects to find air conditioning everywhere and regards its absence as lack of progressiveness.

Among the exhibitors there was no disposition to discount the uncertainties of the business outlook. However, it was pointed out that ample equipment for visible needs is available at present and that some lines are unrestricted and others exempted. While several manufacturers appeared unconcerned over the prospect of securing sufficient raw material to care for their needs, others were frankly working on projects for modified designs, using substitute materials.

Taken as a group, the exhibits of heating apparatus constituted the most comprehensive display of similar appliances ever gathered under one roof. They ranged from the simple hand-fired furnaces through a variety of stokers to examples of the scientific flat-plate automatic burner fostered by the Anthracite Institute through its extensive research program. They included many examples of oil burners, coal-to-oil conversions and oil-to-gas conversions. Reacting to the changing demand caused by the introduction of natural gas in the East, nearly every manufacturer of heating apparatus showed gas-burning equipment. Exhibits of gas burners alone and gas control appliances were also numerous.

The methods of heat extraction and distribution were as numerous as the methods of combustion. The cast iron boiler continues to be preferred by a number of manufacturers for both steam and hot water designs, but the number of steel boilers seems to be increasing and the variety and ingenuity of designs evolved in this field is a study in itself. The number of types and sizes which most of the manufac-

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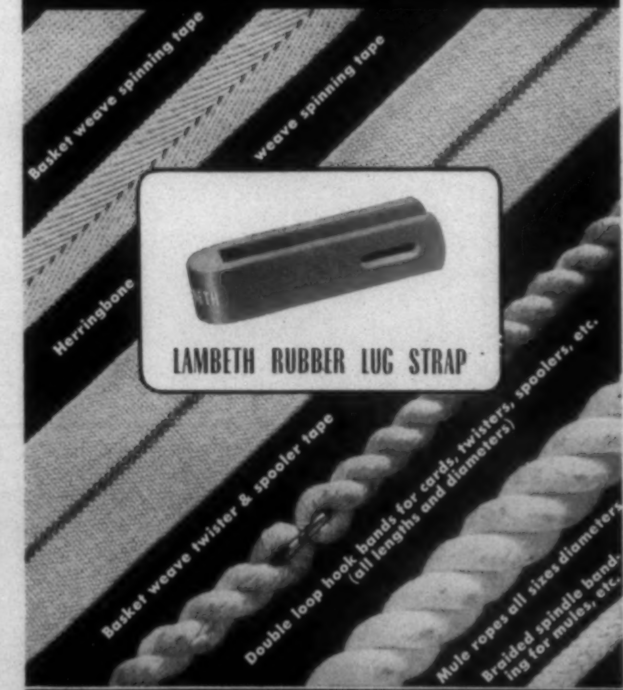
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turers require to complete their lines continues to be remarkable.

In point of the manner in which heat is distributed, new developments were many and varied. Improvements and simplification of ductwork include new methods of fabrication and the employment of new materials, as well as numerous examples of new design in registers, grilles and diffusers.

Incorporated among the exhibits at Philadelphia were many types of air-moving equipment—fans and blowers particularly adapted to the needs of manufacturing plants and warehouses.

In the same general category were the exhibits of air filtration apparatus intended for industrial applications and installation in large buildings. Significant among these were at least three displays of electrostatic air filtration apparatus, one featuring packaged units for installation on small jobs and having a low price feature, another featuring a semi-automatic washer, which is capable of servicing large units section-by-section, without complete interruption of the air flow while a third, featuring a "file-drawer" construction, consists of a series of cells which are individually and conveniently removable for washing. Another exhibitor showed an automatic lint filter for textile mills, in which the medium is a single ply sheet of specially fabricated paper which unrolls across a screen and is caused to inch along as air resistance builds up, thereby renewing the surface continuously.

One of the remarkable features of the exposition was the increase in number and variety of adherents to the cooling phase. For industrial and other large capacity installations, one exhibitor offered a "capillary air washer," consisting of a series of capillary cells composed of finely-packed glass filaments, forming an air filter over which water is sprayed. The principle involved is described as one which divides both air and water into fine streams flowing parallel to each other through low resistance channels. Essentially a dust arrester, this apparatus is also used as a humidifier, but by applying chilled water to the cells, cooling and dehumidifying may be accomplished.

As at all Heating and Ventilating Expositions, the display at Philadelphia brought forth many new ideas, especially through the development work performed by specialists, notably this year in the field of weather controls. One of the simplest of these devices is applicable to forced hot water or radiant heating systems, on which it acts as a mechanical mixing valve to blend the cooler return water with hot water from the boiler in order to provide the proper temperature adjustment. The valve is actuated by a differential thermostat of the hydraulic, or liquid-filled type, the main element of which is exposed to the boiler water temperature, while the secondary element is connected by a capillary tube to an outdoor bulb. As the outdoor temperature rises the valve tends to close, admitting more return water to the system and less of the higher temperature boiler water. As the outdoor temperature falls, the secondary thermostat retracts, admitting a larger proportion of boiler water to the system, and thus anticipating the need for more heat to offset increased radiation from the building.

Another manufacturer has developed an indoor-outdoor control which is sensitive to wind change. Still another has developed an automatic control for steam, hot water and warm air systems, in which the length of the heating period in the on-and-off cycle is automatically adjusted to match the weather, anticipating interior needs by literally measuring the heat loss. An unique feature of this system is that the installation is entirely outdoors and tamperproof.

Program For Quality Control Meeting

The complete program for the quality control meeting to be held April 13 at the School of Textiles of North Carolina State College, Raleigh, was announced recently. The program follows: 9:30 a.m., welcome, Dean M. E. Campbell of the School of Textiles; 10 a.m., "Neps and Cotton," J. F. Bogdan of the School of Textiles; 11 a.m., "New Developments in Opening Equipment," H. J. Cheatham, head of cotton mechanical processing division, Southern Regional Research Laboratory, New Orleans, La.; 12 noon, "Plant Management With Statistical Quality Control," W. E. Crooks, plant manager, Celanese Corp. of America, Rome, Ga.; noon recess, tour through School of Textiles; 2 p.m., "Effect of Card Licker-in Speed on Quality," Elliot B. Grover, head of yarn manufacturing department, N. C. State College; 3 p.m., discussion of Shirley Analyser, joint investigation by Percy W. Woodruff of Erwin Mills and F. H. Martin of Springs Cotton Mills; 4 p.m., discussion of organization.

O.T.S. Offers Textile Literature Review

A 326-page review of the literature dealing with the influence of form factors on the properties of textiles is now available from the Office of Technical Service of the U. S. Department of Commerce. The review, prepared by the Research and Development Branch of the Army Quartermaster Corps, constitutes a preliminary stage in research designed to determine how the inherent properties of fibers can best be translated into fabrics possessing the desired characteristics of wear resistance, water resistance, fireproofing, shrink resistance and color fastness.

Because of the basic relationship of fabric construction to most fields of textile research, the review's 1,053 abstracts cover mechanical behavior and plastic theory; physical form; mechanical properties; viscosity deformation; absorption; solvation and density; friction; fiber theory; yarn theory; fabric theory; sub-fiber structure; testing; fibers; yarns; fabric; and the modification of properties through finishing.

The review, which covers both foreign and U. S. literature prior to 1947, provides abstracts in considerable detail, including, where necessary to an understanding of the data, charts, graphs and formulas. PB 100 363, *A Study of the Effects of Form Factors on the Translation of the Inherent Physical Properties of Textile Fibers into Textile Structure,* sells for $8.25 per copy. Orders should be addressed to the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., accompanied by check or money order payable to the Treasurer of the United States.

Tariff Commission Terminates Investigation

The Tariff Commission announced Jan. 24 the termination of the supplemental investigation regarding extra-long-staple cotton ordered Nov. 29, 1950. The commission did not recommend to the President that a second additional quota for imports of such cotton be permitted during the quota year which ended Jan. 31, 1951.

The regular annual quota on imports of extra-long-staple cotton for the last quota year was exhausted very early in the quota year and a supplemental quota of 7,500,000 pounds of extra-long-staple cotton was proclaimed by the President on Oct. 12, 1950, upon the recommendation of the Tariff Commission. In accordance with the proclamation, the commission issued licenses authorizing importation on behalf of individual cotton manufacturing concerns in quantities determined to be essential for their needs. Under this procedure the entry of the full amount of the supplemental quota was licensed by Nov. 22, 1950.

The supplemental investigation ordered on Nov. 29, 1950, was undertaken as a result of reports that domestic producers of certain products were experiencing difficulties due to inadequate supplies of extra-long-staple cotton. A public hearing in connection with the investigation was held on Dec. 11, 1950. The information obtained by the commission in the public hearing and from other sources indicates that a second supplemental quota for extra-long-staple cotton during the quota year was not warranted.

Coated Fabrics Industry Better Prepared

Wartime economy and business-as-usual will not mix, but the coated fabrics industry remembers the lessons learned ten years ago and is in better position in 1951 than it was in 1941 to meet its obligations to the nation, to its customers and to its workers and owners. This is the view expressed by Gerald H. McGreevy, vice-president in charge of sales for Textileather Corp., expressed at a recent meeting of the Textileather management committee. The meeting was devoted to examining the situation created by the national emergency, as it affects Textileather in particular and the coated fabrics industry in general.

Sketching the background of the picture as it appears today, Mr. McGreevy noted that in the months before World War II Textileather was the first company in the industry to make the development on new and essential equipage items for the armed forces a major project. Four months before Pearl Harbor, he said, all the company's sales and product engineers were pulled off their normal customer contact work and instructed to concentrate on contacts with various governmental engineering and procurement divisions and those customers who were fabricating processed fabrics and similar materials on government contracts. As a result, new and quite satisfactory materials for essential military requirements were furnished. Textileather was the first company in the industry to receive the Army-Navy E Award, he said.

"Now, all of us are confronted by another transition to wartime economy," Mr. McGreevy said. "We do not believe in half measures. We are either at war or at peace. We

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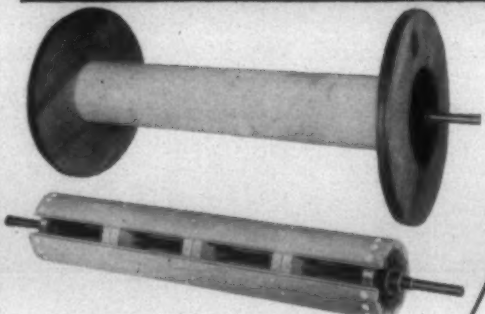

STYLE GK for Cotton warps, shown above. Also GR with extra reinforcement for Rayon, and GN of heaviest construction for Nylon and Synthetics.

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don't subscribe to the idea that business can be conducted as usual under a wartime economy. When we look at the problems which arose and were solved ten years ago and compare them with what can be foreseen of today's problems, we find many important differences, but so many similarities that the principles applied before still are sound today."

Finishers Re-elect Arthur G. Poor

Arthur G. Poor of Standard Bleachery & Printing Co., was re-elected president of the National Association of Finishers of Textile Fabrics at the annual meeting of the group Jan 16 in New York City. Mr. Poor told members that the association is planning concentrated national emergency efforts and is better prepared than during World War II to do its part. He warned that in the face of present conditions, many members would be called on to be more active in the current emergency.

"As to the future," Mr. Poor declared, "were I to predict just one thing that might take place—either during the year—or even next month, I believe I would be very foolish. One can hardly do that in one's own business today. To do it for a whole industry is out of the question. There are, however, a few things we know. We know we will have good production; how profitable is another matter."

Continuing, Mr. Poor said: "We do know that we are entering a period similar to 1941 and 1942. We know there is a national emergency. We know that we are going to be called upon to make greater sacrifices than during World War II. We know there will be higher taxes. There will be more regulations. There will be shortages of various materials.

"Our customers will again have to recognize the work for the armed services comes first and again co-operate with us as they did so well before. Above all we shall be going through very trying times—maybe for many, many years. Our industry did everything it was called on to do in World War II. I'm sure it is ready again. As a matter of fact, I believe we are better prepared and have better 'know-how' than ever before."

A 12 per cent increase in the yardage processed during 1950 was noted in the report of Alice C. Moore, secretary and treasurer of the association. The yardage gain covers white, colors, blacks and prints as reported by the same association members in 1949 and 1950, it was observed, thus furnishing "an excellent indication of trend." They continue to tie in closely with the later reports of the Bureau of the Census, it was noted.

Regarding data collected on quantities of gray bales and cases of finished goods held in finishing plants, the report commented: "This service, which is an accommodation to customers, for the past few years has become quite a problem to finishers due to lack of space to store the increased amounts of bales and cases. Estimated figures indicate that at the end of 1950 there is an approximate increase of seven per cent in gray bales and an increase of 42 per cent in cases of finished goods holding compared with the end of 1949."

The color classification service of the association handled 21,626 shades during the year, it was pointed out, representing a decrease from 1949 of 36 per cent, although the total was 445 per cent higher than in 1943. Last year vat colors represented 79 per cent of the classifications made, with 42 per cent in Classes 1 and 2, and the balance in Classes 3, 4, 5 and special. The largest number of classifications made by class were in Class 1, it was noted.

In regard to water-repellent fabrics, the report stated: "Activity having to do with the issuance of Trade Practice Rules by the Federal Trade Commission is under way at present. However, as yet there is nothing of a definite nature to report in this very complicated situation which affects so many different groups in the industry—from the chemical manufacturers through the retailers. The association is keeping in close touch and lending its assistance to the end that practical rules, test methods, etc., may result."

Other officers of the association, all re-elected to office, are G. D. Harrison of the Lewiston (Me.) Division of Pepperell Mfg. Co., chairman of the board; S. M. Cone, Jr., of Cone Finishing Co., Greensboro, N. C., and W. H. Howell of Bradford Dyeing Association, vice-presidents; and Miss Moore, secretary and treasurer.

Elected to the executive committee for three-year terms expiring in January, 1954, were: J. K. Milliken, Mt. Hope Finishing Co., North Dighton, Mass.; C. B. Hayes, Pacific Mills, Lyman, S. C., and A. L. Garfinkel, Lowell Bleachery, Inc., St. Louis, Mo.

Chosen to the executive group for one-year terms expiring next January were: E. F. Farrell, Mansfield (Mass.) Bleachery; Mr. Harrison; Robert Amory, Springs Mills, Inc., Lancaster, S. C.; J. M. Cole, Cold Springs Bleachery, Yardley, Pa.; N. B. Durfee, Lincoln Bleachery & Dye Works, Lonsdale, R. I.; W. O. Forssell, Slatersville Finishing Co. (Walpole, Mass.), Slatersville, R. I.; Archie O. Joslin, Rock Hill (S. C.) Printing & Finishing Co.; Lawrence Marx, Jr., Clearwater (S. C.) Finishing Co.; A. G. Odell, Kerr Bleaching & Finishing Works, Concord, N. C.; Julian Robertson, North Carolina Finishing Co., Salisbury, N. C.; J. A. Simmons, Lanett Bleachery & Dye Works, West Point, Ga.; B. I. Ward, Bellman Brook Bleachery, Fairview, N. J.; and R. W. Ward, Providence (R. I.) Dyeing, Bleaching & Calendering Co.

In addition to the above, the following members of the executive committee continue to serve unexpired terms, as follows—Until January, 1952: T. A. Adams, U. S. Finishing Co., Norwich, Conn.; W. R. MacIntyre, Jos. Bancroft & Sons Co., Wilmington, Del., and G. E. Sinkinson, Sayles Finishing Plants, Inc., Saylesville, R. I. Until January, 1953: William Berry, Riegel Textile Corp., New York; W. A. Broadfoot, Aspinook Corp., Jewett City, Conn., and H. M. Burke, Dutchess Bleachery, Lockwood-Dutchess, Inc., Wappinger Falls, N. Y.

Alabama Safety Contest Winners Announced

Gurney Mfg. Co., Prattville, Ala., has won the Hugh M. Comer trophy in the tenth Alabama Statewide Textile Safety Contest in the spinning division and Russell Mfg. Co., Alexander City, Ala., has won the honor in the spinning and weaving division, according to A. Finley Harper, Montgomery, Ala., chief of the safety and inspection division of the Department of Industrial Relations. Tallassee Mills, Tallassee, and Bemis Brothers Bag Co., Talladega, were second and third place winners in the weaving and spinning division, Mr. Harper said, and Standard-Coosa-Thatcher Co., Piedmont, and Linen Thread Co., Blue Mountain, were second and third place winners in the spinning division.

Dwight M. Wilhelm, executive vice-president of the

Alabama Cotton Manufacturers Association, said that the tenth anniversary of the textile safety contest will be observed with the presentation of the Comer trophies at the 50th anniversary of the association at the 1951 annual meeting of the group in the Beuna Vista Hotel, Biloxi, Miss., April 12-13-14.

"Our statewide textile safety contest is, I believe, the oldest continuous textile safety contest in the South," Mr. Wilhelm said. Back in 1939 and 1940, one of the early matters our associates devoted itself to was the development of a means of improving safety in mill conditions. Eventually, it resulted in two particular men taking keen interest in the very human subject. Between Hugh M. Comer of Avondale Mills and Judge John D. Petree, director of the State Department of Industrial Relations, the idea originating within the association began to take definite form.

"The greatest value of the program is one that cannot be determined," he pointed out. "That is, the number of Alabama men and women in the state's textile industry who have had no accident and who have not been injured, as compared to what might have happened without this human participation in industrial safety over the state."

Mr. Harper reported that "the average accident frequency of contesting companies in Alabama during the years 1946 to 1950, inclusive, has been consistently lower than that of companies reporting to the National Safety Council." Twenty-four Alabama mills competed in the weaving and spinning division of the 1950 contest and seven were contestants in the spinning division.

Federal Court Authorizes Switzer Patent

Following a trial before Judge Richmond B. Keech of United States District Court in Washington, D. C., in a patent suit brought by Joseph L. Switzer, et al., against John Marzall, Commissioner of Patents, the court has ruled that Switzer claims for daylight fluorescent fabrics and the Switzer process for producing them are patentable. The decree, issued as a consequence of this federal court decision, authorizes the Commissioner of Patents to issue a patent containing the specifications and claims which were before the court.

The patent claims, tested in court before the issuance of a patent rather than by the usual procedure of establishing validity of the claims in a suit filed afterward, cover not only the preferred Switzer process of producing daylight fluorescent fabrics, but substantially any daylight fluorescent fabrics now on the market, regardless of the particular process by which the fabric may be produced. The fabrics covered include yarns, felt, knitted textiles and the like, as well as woven fabrics.

The essential facts of the case are set fort with great clarity in the formal opinion written by the court, from which the following paragraphs are quoted verbatim: "The

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patent has been denied by the Patent Office on the ground that the various steps have been anticipated by prior patents, domestic and foreign. While it is admitted that plaintiff obtains improved results, it is contended that his process merely combines steps used in prior patents and uses materials known already to be effective in the dyeing of cellulose acetates.

"I find that the plaintiff's process, while utilizing certain materials and processes made known by prior patents, attains a new result, namely, daylight fluorescent fabrics, or at the least, substantially 'enhanced qualities of utility, namely, fluorescence of fabrics enhanced to a degree never before conceived of, and does exhibit the necessary spark of genius; and that therefore plaintiff is entitled to a patent.

"While the commercial success of a new development does not render a patent valid, the Supreme Court has stated that 'in cases where the question of patentable invention is a closed one, such success has weight in tipping the scales of judgement toward patentability.' In the instant case, I find the widespread recognition by industry, government and the public of the utility of materials treated by plaintiff's process, and the fact that established firms have become licensees of plaintiff prior to his obtaining of a patent, sufficient to tip the scales in favor of patentability, if it be conceded that the question is a close one."

The federal court decision represents a Switzer victory in a long contest to overcome the reluctance of the Patent Office to issue patent coverage as broad as that which has been sought by the Switzers for many years. Whereas the patentability of end-use daylight fluorescent signal and display devices had been recognized years ago, the Patent Office had been reluctant to issue coverage so broad that it would extend to weavers, knitters, dyers, converters, brokers, etc., as well as to end users of daylight fluorescent fabrics.

Switzer Bros., Inc., is licensing a steadily increasing number of responsible firms to make and sell daylight fluorescent apparel under the trade mark Day-Glo (Reg. U.S. Pat. Off.). Every apparel manufacturer obtaining such a license agrees to maintain standards of quality which have been proved essential for the protection of consumers; each such manufacturer automatically obtains a license under pertinent Switzer patents.

Bigelow-Sanford Purchases Rayon Firm

Bigelow-Sanford Carpet Co., Inc., announced Dec.28 that it had contracted to purchase the interest of the estate of Bernard R. Armour in Hartford Rayon Corp. The interest of the Armour estate consisted of 39 per cent of the outstanding common stock, 38 per cent of the outstanding preferred stock, and $130,000 outstanding notes of Hartford Rayon Corp. The company, located at Rocky Hill, Conn., manufactures heavy denier rayon filament yarn.

James D. Wise, president of Bigelow-Sanford Carpet Co., Inc., and William Steinschneider, president of Hartford Rayon Corp., stated that the present filament operations of Hartford will be continued and the market supplied as heretofore. They said that there was no intention of converting Hartford's filament yarn operations to the production of rayon staple for carpet manufacture.

"Bigelow-Sanford's plans to expand Hartford's facilities," Mr. Wise said, "so as to supplement Hartford's present filament operations by the manufacture of rayon staple for carpets are in progress and are expected to be completed and announced by the end of January. Such additional operations at Hartford's plant, however, are not expected to meet Bigelow's expanding needs for rayon suitable for carpets. Bigelow plans to continue the purchase of carpet rayon from other sources in order to meet its requirements."

Mr. Wise said that 27 per cent of Bigelow's planned production for the Spring of 1951 will contain carpet rayon and that this percentage will be increased as carpet rayon increase. He said that Bigelow is convinced that the future of the carpet industry is tied up with the development and use of man-made fibers which have been proven to be equal to or better than wool, and are approximately one-third of the cost of wool.

Seven Years' Research For New Product

Robert W. Philip, vice-president in charge of research for Callaway Mills Co., LaGrange, Ga., in a recent address before the LaGrange Lions Club stated that an average of seven years of research are required to bring a new textile product to the market. Ideas for research often come from the men in the plants, Mr. Philip said, but the development of these ideas always requires teamwork.

The library of Callaway Mills' research division includes 3,300 volumes on textiles and related technical subjects. The testing laboratory has 14 employees who turn out approximately 12,000 tests each month, he said. In the chemistry department, 1,000 tests are conducted in a month to determine the absorbency of material, color fastness and the amount of moisture. But the chemistry department has other functions such as flame-proofing materials, improving adhesion of fabrics to rubber and improving the formula of print fabrics.

Detergent Dilemma Clarified By Edelstein

Discussing the subject of detergents before the Northern New England Section, A.A.T.C.C., Jan. 26 at Cambridge, Mass., Sidney M. Edelstein, technical director, Dexter Chemical Corp., stressed testing of detergents under actual plant operating conditions. Wetting tests, surface tension measurements, standard soil cloth tests and chemical analysis, Mr. Edelstein explained, cannot help the mill technician to choose the best detergent for the job at hand.

Chemical analysis can reveal the chemical structure of the detergent and this knowledge coupled with personal experience, can indicate certain general properties and reactions to be expected. It cannot, however, indicate whether one detergent will work better than another, unless both detergents are of the same type. Mr. Edelstein pointed out, for example, that comparison of an alkylaryl sulfonate type of detergent with a sulfated amide type will generally reveal twice the amount of active ingredient in the former. In actual performance, however, both detergents may be comparable, and in some cases, the detergent with less active ingredient may do a better scouring job.

Similarly, the significance of surface tension measurements was clarified. Mr. Edelstein related such measurements merely to the solution's ability to displace air—not to its primary job of displacing dirt, grease and other soil.

Wetting tests, on the other hand, can be extremely useful as a means of control, whereby wetting curves may be plotted and tests made to determine the concentration of detergent in the dye bath. Since wetting is, however, but one attribute of a detergent, wetting tests are of limited value in determining its efficiency. Equally limited, it was claimed, are standard soil cloth tests because differences of soil, types of fibers and fabrics, thicknesses of weave, machinery used, time and temperature and other conditions present too many variables to permit practical money value comparison.

The most beneficial tests can be conducted, Mr. Edelstein pointed out, when actual plant operating conditions are simulated in the laboratory. For example, evaluation of a detergent used for scouring raw wool can be performed in a miniature scouring train where actual operating conditions such as time, temperature and rinsing procedures can be duplicated. A practical tests of this nature, plus the use of sound judgment, is at present, the surest method for choosing the proper detergent for the job at hand, he declared.

Firms Cited For Excellent Management

Five companies in the textile industry are among 238 firms throughout the United States and Canada which are being awarded "Certificates of Management Excellence" for the year 1950 by the American Institute of Management, New York, according to Jackson Martindell, president of that non-profit foundation. The awards, which will be bestowed annually hereafter by the institute, are based on its continuing study of more than 2,000 leading concerns—designed to provide a base for research into corporate policies and procedures.

The five honored companies referred to include: American Viscose Corp., Philadelphia; Cannon Mills Co., Kannapolis, N. C.; Celanese Corp. of America, New York; Industrial Rayon Corp., Cleveland, and United Merchants & Manufacturers, Inc., New York.

In weighing the merits of each management, Mr. Martindell explained, credits are given for excellence in ten separate fields—economic function, corporate structure, health of earnings growth, fairness to stockholders, research and development, directorate analysis, fiscal policies, production efficiency, sales vigor and executive evaluation.

"The purpose of the awards," the A.I.M. president declared, "is to encourage management in all lines of business to give due weight to all ten factors, rather than to concentrate—as many do—on only one or two. For example, some firms are strong on research and development but lack unity of command within the organization. Others display real genius in financing, but have blind spots in

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dealing with personnel. Some are notable for aggressive, top-flight selling, but are not preparing younger men to take over when the present company heads retire. The fact that this year's recipients come from 25 states and 93 separate industries shows that sound management principles are applicable to all lines of business, wherever located. We hope that succeeding years will witness a further spread, with an increasing number of firms becoming entitled to the designation, 'excellently managed.'"

Safety Council Offers Training Films

"Speaking of Safety," a new series of six training films showing supervisors and foremen how to address and conduct meetings, has just been announced by the National Safety Council. The series was prepared under the guidance of Dr. Irving J. Lee of the School of Speech, Northwestern University, Evanston, Ill.

Film No. 1 in the series is "The Power of Speech." It lists occasions when foremen and supervisors may be called on to make a speech and explains the difference between a formal and a working speech. It also discusses the purpose of a speech from the audience and speaker standpoints. Film No. 2, "Butterflies in Your Stomach," explains physiological reactions that cause stage fright and shows how to overcome them. Film No. 3, "The Key to Good Speaking," outlines four methods of preparing a speech and gives the recommended method. It also shows, step by step, how to prepare a typical safety speech using the recommended method. Film No. 4, "On Your Feet," explains what to do physically when making a talk. It shows how to stand, the purpose of moving around and how to do it effectively, what to do with your hands, and where to look. Film No. 5, "Now You're Talking," discusses actual speech making. It covers vocabulary and phrasing of ideas, how loudly to talk, and the speaker's attitude. It also shows how friendliness, sincerity and enthusiasm can make a speech a success. Film No. 6, "Ring the Bell," shows how to get and hold the attention of an audience, and how to illustrate a point by telling a personal experience, a humorous story or by comparisons. It also shows how to "break the ice," and explains the value of demonstrations, scale models or mock-ups, films, still pictures, graphs, charts and diagrams.

The films are standard, 35-mm. soundslide, with 16-inch records, 33 1/3 r.p.m. About 13 minutes is required for each. One side of the recording uses the 30-50 low frequency signal, the other side uses the standard audible signal for advancing the film manually.

Single sets of the six films, packaged in a leatherette case containing a leader's manual, are offered to members of the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill., at $100 each. In quantities of from two to nine the sets are $95 each. Sets of ten or more are $90 each. Single copies of individual films in the series are $18 each. In quantities of from two to nine, individual films are $17 each. Sets of ten or more individual films are $16 each. Prices to non-members of the council are double those listed.

Book Reviews Use Of Instruments In Research

The acceleration of research through the use of industrial and related instruments and apparatus is the subject of an 84-page book just published by Brown Instruments Division of Minneapolis-Honeywell Regulator Co. The book describes, for what is believed the first time, many types of equipment which, alone or in combination with other apparatus, are being used in research and analytical studies. In addition to the importance of the publication as a reference and application guide for researchers and analysts, the book reflects the great strides made in the instruments field since World War II. It also emphasizes how extensively industrial instruments are being used alone or in combination with others for technical, engineering and laboratory work.

The company has given extensive mention to devices, made by many organizations, which are used in combination with its own instruments. It seems that all are definitely accepted and vital components of over-all systems for research and analyses. When packed together these applications, which are understood to be only a part of over-all growth, give an insight into the amazing advances in scientific knowledge obtained through use of modern instrumentation.

The book is replete with known research and analytical instrumentation uses. Under the heading of Analytical Apparatus, the book details the robotized polarograph, titrator and still applications and describes various types of spectrometers. The same section covers continuous gas analyzers. The section on Precision Laboratory Measuring Instruments includes mention of electronic indicators, the Electrometer, pyrometers for measuring low temperatures and radiation pyrometers for measuring temperatures up to 7,000 degrees F. This section also includes information on high vacuum gauges and pressure and force transducers. A third section reviews research apparatus components such as converters, balancing motors and Servo amplifiers which constitute integral operating parts of research and analytical apparatus. Limited quantities of each data sheet used in the book, after revising and editing, are being made available by the industrial division for engineering schools, colleges and for research training programs.

Show To Consider Textile Operations

Many problems of materials handling in the textile industry will be considered at the Materials Handling Conference which will be held concurrently with the National Materials Handling Exposition at the International Amphitheatre, Chicago, April 30-May 4, inclusive. The conference, which is the most extensive ever undertaken in the field, is sponsored by the American Material Handling Society.

Textile executives also will find scores of machines specially suited to the industry among the thousands which will cover ten acres of exhibit area, both indoors and out. Among the topics of prime interest will be "Bulk Handling and Storage Methods for Solids," "Incoming Raw Materials and Components," "Co-ordinated Handling Through the Production Cycles," and "Plant Warehousing and Shipping."

Three sessions will be devoted to unit loading and packaging methods, a series of recent developments which is engaging major attention among engineers and production executives. One session will consider such unit loading with pallets and skids; a second, without pallets, and a third, to the latest developments in unit load packing and packaging.

Other sessions will include a discussion of fundamentals; methods of making a materials handling survey; relationships of handling to other departments; analysis of what constitutes materials handling costs, and methods of presenting a materials handling program to top management.

Still another session, devoted to receiving and shipping methods will consider what a materials handling engineer can do to reduce damage, speed handling and reduce shipping costs. These talks will cover the four basic methods of transportation, railroads, truck lines, airlines and steamships. The society's chapters, located all over the country, are conducting the various sessions to provide discussions based on geographical problems as well as those of individual industries.

The six acres of exhibits and the outdoor area of four acres will comprise the most extensive display ever assembled of cost reducing handling equipment in operation. The exposition, which is sponsored by the Material Handling Institute, is conducted by Clapp & Poliak, Inc. Admission to both the exposition and conference will be free. Advance registration cards may be obtained from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y.

Ventile To Be Featured At British Show

At the British Industries Fair this Spring, U. S. buyers of clothing and textiles will see the latest achievements of Britain's research workers, designers and craftsmen. These will be on display at Earls Court, London, April 30-May 11, in the biggest textile exhibit ever held in Britain.

A feature of the section will be the display of Ventile by a number of British manufacturers. Ventile is a water-repellent cotton cloth which does not suffer from the disadvantage of condensation, since it allows body vapor to escape, while preventing rain from penetrating. The fabric was born in the research laboratories of the Shirley Institute, headquarters of the British Cotton Industry Research Association at Manchester, in Northern England. It is handled by the Ventile Fabrics Association of Great Britain, St. Anne's St., Manchester 2, England.

Its water-repellent qualities are achieved partly by means of a proofing agent and partly by a self-sealing action due to the swelling of the fibers when exposed to rain or water. Before the fabric can be branded Ventile for sale, samples must be given stringent tests. One test is to subject them to the equivalent of no less than nine inches of rainfall.

A synthetic fur made from nylon fibers has been developed at the Aero Medical Laboratory at Wright-Patterson Air Force Base, Dayton, Ohio. The synthetic was developed on urgent Air Force request.

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New Fabric For Army Fatigue Clothes

A new type cotton sateen cloth eventually will replace herringbone twill as the material for Army fatigue clothing, the Department of the Army announced recently. Developed by collaboration between the Army Quartermaster Corps and the textile industry, the new fabric has been found, after extensive testing, to have much better wearing qualities than herringbone twill.

The Quartermaster Corps plans to purchase 15,000,000 yards of the sateen during the next several months. It will be manufactured into jackets and coats for use as work garments. However, the new fatigue clothing will not be issued to troops until present supplies of herringbone twill uniforms are exhausted.

The new sateen, which, like herringbone twill, will be 8.5-ounce weight to the square yard, was tested in laboratories, at the Quartermaster Corps combat course, Fort Lee, Va., and by troops in the field. The so-called reverse side of the material was found to have the greatest resistance to abrasion with a wearing quality equal to nearly twice that of herringbone twill.

C.C.C. To Buy Extra-Long Staple Cotton

An offer to purchase extra-long staple cotton of the better grades now located outside the United States was announced Feb. 12 by the U. S. Department of Agriculture. The Commodity Credit Corp. will purchase the cotton for the national stockpile at the request of the Munitions Board and General Services Administration. This offer does not include cotton which is now in the United States or extra-long staple American-Egyptian cotton.

Offers should specify the following for each lot offered for sale: (1) quantity, (2) variety, (3) quality, (4) proposed delivery point, and (5) price, together with any other pertinent details relating to the offer. Cotton offered must meet National Stockpile Specification P84, General Services Administration. Offers will be considered on a negotiated basis. C.C.C. reserves the right to reject any or all offers. Offers may be submitted directly to the Cotton Branch, Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Rayon Production Hit New Peak In 1950

Rayon yarn and staple production in the United States during 1950 totaling 1,259,400,000 pounds set a new record for the industry, according to the *Rayon Organon,* statistical bulletin of the Textile Economics Bureau, Inc. The output was 27 per cent greater than in 1949 and 12 per cent greater than the previous record established in 1948 when 1,124,300,000 pounds were produced. The *Organon* points out that the rayon production figure does not include non-

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cellulose-base manufactured yarns and fibers such as dynel, glass fiber, nylon, Orlon, protein fiber, saran, Vinyon, etc., which in the aggregate were produced to an estimated total of 145,000,000 pounds in 1950, an increase of 58 per cent compared to 1949.

World rayon production last year also set a new all-time record, according to the *Organon,* with a total of 3,500,000,000 pounds estimated for all the producers on the globe, a gain of 24 per cent compared to the previous record in 1941, and 29 per cent more than the 1949 production. Filament yarn in the world totals increased 17 per cent over the previous year and staple production was up 49 per cent.

The United States rayon production in 1950 was 3⅓ times as great as the 1939 pre-war output. With the exception of 1949, production records for the rayon industry in this country have continued in an unbroken series of year-to-year increases since 1938. Of the 1950 rayon output, 76 per cent or 953,900,000 pounds were rayon filament yarn and 24 per cent or 305,500,000 pounds were rayon staple.

Rayon imports during 1950 amounted to 97,800,000 pounds of yarn and staple. Imports also established a new record during the year. Total available supply for consumption during 1950 amounted to 1,351,400,000 pounds of filament yarn and staple, a gain of 36 per cent compared to 1949 and 18 per cent larger than the previous record figure in 1948. Exports from the United States last year totaled 15,000,000 pounds, making an import balance here of 82,800,000 pounds.

The *Organon* analysis of production reveals that all major divisions of the industry not only showed increases from 1949 to 1950 but also exceeded any previous year's output. The total output of viscose high tenacity yarn was 310,000,000 pounds, a seven per cent gain over 1949 and 18 per cent over 1948; viscose+cupra textile yarn (intermediate+regular tenacity) 317,300,000 pounds, 24 per cent over 1949 and six per cent over 1948; acetate yarn, 326,600,000 pounds, 28 per cent over 1949 and 11 per cent over 1948; and total textile yarn, 643,900,000 pounds, 26 per cent over 1949 and nine per cent over 1948.

In the staple plus tow division of the industry, viscose staple was produced to the extent of 188,500,000 pounds, a gain of 45 per cent over 1949 and two per cent over 1948 while acetate staple amounted to 117,000,000 pounds, a gain of 79 per cent over 1949 and 40 per cent over 1948. Viscose rayon of all types was produced to the extent of 815,800,000 pounds, while total acetate rayon amounted to 443,600,000 pounds. World production of staple in 1950 is estimated at 1,580,000,000 pounds, an amazing 49 per cent increase over 1949. It exceeded the previous world

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total of 1,550,000,000 pounds in 1941, however, by only two per cent.

United States production in 1950 constituted 36 per cent of the world total as compared with 17 per cent in 1939, according to the *Organon*. The United States produced 50 per cent of the total world output of filament yarn last year compared with 29 per cent in 1939; 19 per cent of the rayon staple world output compared with five per cent in 1939.

Shipments of rayon filament yarn by domestic producers in 1950 amounted to 962,200,000 pounds which represents the production of 953,900,000 pounds plus 8,200,000 pounds taken from inventories. Domestic consumers received 949,100,000 pounds and the balance was exported. Domestic consumers received 22 per cent more than in 1949, while exports showed a decline of 13 per cent from the previous year. It is noted also, by the *Organon*, that imports of rayon filament yarn in 1950 amounted to 6,500,000 pounds compared to the nominal 300,000 pounds that were imported in 1949.

By trades, shipments of viscose+cupra filament yarn showed the following percentage increases in 1950 compared to 1949: hosiery four per cent; circular knit goods eight per cent; warp knit goods 21 per cent; broad woven goods 34 per cent; narrow woven goods 30 per cent; miscellaneous uses 69 per cent; and total textile uses 31 per cent. Shipments of viscose yarns for tires and related uses last year increased seven per cent. The corresponding increases for acetate filament yarn shipments to domestic consumers from 1949 to 1950 were as follows: hosiery 33 per cent, circular knit goods 40 per cent, warp knit goods 21 per cent, broad woven goods 29 per cent, narrow woven goods 25 per cent, and miscellaneous uses 26 per cent.

The most important outlet for rayon textile yarn was the broad woven goods industry which in 1950 received 82½ per cent of the 648,100,000-pound total. Warp knitters were the next most important outlet receiving 5½ per cent; circular knit goods 5½ per cent; miscellaneous uses 3½ per cent; narrow woven goods two per cent and hosiery one per cent. In the decade between 1940 and 1950 the following percentage changes of shipments by trades have occurred: hosiery, minus 56 per cent; circular knit goods, minus eight per cent; warp knit goods, plus 120 per cent; broad woven goods, plus 82 per cent; narrow woven goods, plus 49 per cent; miscellaneous uses, plus 316 per cent; and total domestic shipments, plus 71 per cent.

By geographic areas, the *Organon* records that compared to 1949, all areas in 1950 shared in the increased shipments. Compared with the previous record year of 1948, however, there were some net reduction in deliveries to consumers in Pennsylvania and Ohio and the Mid-west and West areas.

Of the 648,000,000 pounds of textile yarn shipped to domestic consumers, New England received 25 per cent; the Metropolitan area 9½ per cent; Pennsylvania-Ohio 13½ per cent; Mid-West and West one-half per cent; Piedmont 49 per cent and South 2½ per cent. Of the shipments of 301,000,000 pounds of high tenacity yarn for tires and related uses, the New England and Metropolitan areas received three per cent; Pennsylvania and Ohio and Mid-west and West 30 per cent; Piedmont 32½ per cent; and South 34½ per cent.

Producers total shipments of rayon staple in 1950 amounted to 306,400,000 pounds, which represents the production of 305,500,000 pounds and the balance from stocks held by producers at the beginning of the year. Of total shipments, 1,900,000 pounds were exported and the balance sent to domestic consumers.

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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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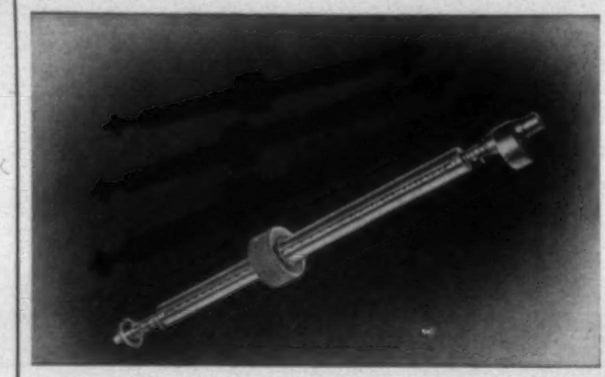

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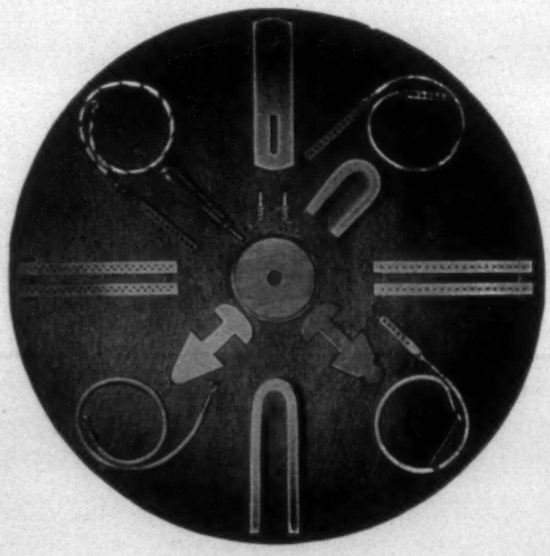

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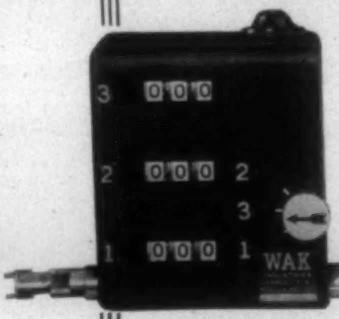

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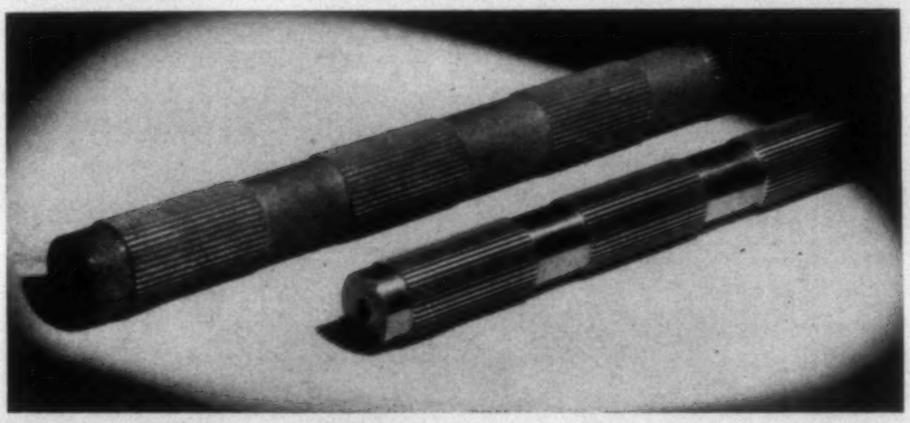

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SOUTHERN SHUTTLES DIVISION, Steel Heddle Mfg. Co., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C., C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service. Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenviille, S. C., J. J. Kaufmann, Jr., V-Pres. and Mgr. of Southern Divisions; Davis L. Batson and Sam Zimmerman, Jr., Sales and Service. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga.; Southern Shuttles, a division of Steel Heddle Mfg. Co., 621 E. McBee Ave., Greenville, S. C., J. J. Kaufmann, Jr., Mgr.

SOUTHERN SPINDLE & FLYER CO., Charlotte, N. C.

STALEY MFG. CO., A. E., Decatur, Ill. Sou. Offices, 2000 Rhodes-Haverty Bldg., Atlanta, Ga. Wm. H. Randolph, Jr., Southeastern Mgr.; Sou. Reprs.: W. N. Dulaney, 2000 Rhodes-Haverty Bldg., Atlanta, Ga.; L. A. Dillon, 815 Third St., Durham, N. C.; Geo. A. Dean, H. A. Mitchell, Montgomery Bldg., Spartanburg, S. C.; W. T. O'Steen, 435 N. Main St., Greenville, S. C.; Walter P. Hope, Country Club Apts. 16-C, Columbus, Ga.

STANDARD MILL SUPPLY, INC., 2319 Hutchinson Ave., Charlotte, N. C. A. Benson Davis, V-Pres.

STANLEY WORKS, THE, New Britain, Conn. Sales Reprs.: G. H. Little, Harrison Bldg., Room 414, 4 S. 15th St., Philadelphia, Pa., Tel. Rittenhouse 9977; G. R. Douglas, 707 Columbian Mutual Towers, Memphis 3, Tenn., Tel. 8-7117; M. A. Hawkins, 3813 General Taylor St., New Orleans 15, La., Tel. Magnolia 5353; H. C. Jones, care The Stanley Sales Co., 410 Candler Bldg., Atlanta, Ga., Tel. Lamar 4651; G. J. McLernon, 209 Hubbard St., San Antonio 2, Tex., Tel. Travis 3653; Charles J. Turpie, Jr., 1412 Scott Ave., Charlotte, N. C .,Tel. 3-7015; J. A. Dickson, P. O. Box 390, 112 Bales Ave., Phone 9-2812, Chattanooga, Tenn.; T. P. West, Jr., 7 Mallard St., Greenville, S. C., Tel. 3515-M.

STEEL HEDDLE MFG. CO., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C., C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service, Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenville, S. C., J. J. Kaufmann, Jr., V.-Pres. and Mgr. of Southern Divisions; Davis L. Batson and Sam Zimmermann, Jr., Sales and Service. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga.; Southern Shuttles, a division of Steel Heddle Mfg. Co., 621 E. McBee Ave., Greenville, S. C., J. J. Kaufmann, Jr., Mgr.

STERLING RING TRAVELER CO., 101 Lindsay St., Fall River, Mass. Sou. Reprs.: M. H. Cranford, 135 Walnut St., Chester, S. C.; D. R. Ivester, Clarkesville, Ga.; T. B. Farmer, Box 150, Langley, S. C.

STODGHILL & CO., Atlanta, Ga.

TERRELL MACHINE CO., THE, Charlotte, N. C. E. A. Terrell, Pres., W. S. Terrell, Sales Mgr.

TEXAS CO., THE, New York, N. Y. Dist. Offices, Box 901, Norfolk, Va., and Box 1722, Atlanta, Ga. Bulk Plants and Warehouses in all principal cities. Lubrication Engineers: P. C. Bogart, Norfolk, Va.; W. H. Goebel, Roanoke, Va.; F. M. Edwards, Raleigh, N. C.; W. P. Warner, Greensboro, N. C.; C. W. Meadors, Charlotte, N. C.; J. S. Leonard, Greenville, S. C.; F. G. Mitchell, Columbia, S. C.; L. C. Mitchum, Atlanta, Ga.; A. C. Keiser, Jr., Birmingham, Ala.; J. E. Buchanan, Munsey Bldg., Baltimore, Md.; G. W. Wood, Charlotte, N. C.; J. H. Murfee, Greensboro, N. C.; G. B. Maupin, Greensboro, N. C.; W. T. Allen, Greensboro, N. C.; C. T. Hardy, Durham, N. C.; J. G. Loudermilk, Atlanta, Ga.; A. C. Evans, Macon, Ga.; J. S. Sammons, Birmingham, Ala.; J. M. Malone, Montgomery, Ala.; H. E. Meunier, Charlotte, N. C.; C. B. Fischer, Goldsboro, N. C.

TEXTILE APRON CO., East Point, Ga.

TEXTILE SHOPS, THE, Spartanburg, S. C. E. J. Eaddy.

TIDE WATER ASSOCIATED OIL CO., 17 Battery Place, New York, N. Y. S. E. District Office: 3119 S. Blvd., Charlotte 3, N. C., K. M. Slocum, Dist. Mgr., Tel. Charlotte 2-3063. Sales Reprs.: R. C. Cook, 1317 Orchard Rd., Richmond 21, Va., Tel. Richmond 84-0804; E. O. Eagle, 620 Joyner St., Greensboro, N. C., Tel. Greensboro 6291; John S. Barnett, Jr., 2 Rodney Ave., Greenville, S. C., Tel. Greenville 3-7128.

U. S. RING TRAVELER CO., 159 Aborn St., Providence, R. I. Sou. Office and Sales Room: 1803 Augusta Rd., Greenville, S. C. Sou. Reprs.: William P. Vaughan and Wm. H. Rose, P. O. Box 1048, Greenville, S. C.; Oliver B. Land, P. O. Box 1187, Athens, Ga.; Harold R. Fisher, P. O. Box 83, Concord, N. C.

UNIVERSAL WINDING CO., P. O. Box 1605, Providence, R. I. Sou. Offices, 819 Johnston Bldg., Charlotte, N. C.; Agts.: R. M. Mauldin and D. M. Dunlap; 903 Whitehead Bldg., Atlanta, Ga., Agt. J. W. Stribling.

VALENTINE CO., J. W., 612 S. Main St., Winston-Salem, N. C.; Box 278 Salem Station, Winston-Salem, N. C. T. Holt Haywood, Wachovia Bank & Trust Co. Bldg., Winston-Salem, N. C.

VEEDER-ROOT, INC., Hartford, Conn. Sou. Office, Room 231 W. Washington St., Greenville, S. C., Frank J. Swords, Sou. Dist. Mgr.

VICTOR RING TRAVELER CO., Providence, R. I., with Sou. Office and Sales Room at 358-364 W. Main Ave., P. O. Box 842, Gastonia, N. C. Phone 247. Also W. L. Hudson, Box 1313, Columbus, Ga.

WAK INDUSTRIES, 1314 S. Tryon St., Charlotte, N. C.

WATSON & DESMOND, 218½ W. Fourth St., Charlotte 1, N. C. Reprs.: W. F. Daboll, Jefferson Standard Bldg., Greensboro, N. C.; R. V. McPhail, 709 S. Jackson St., Gastonia, N. C.; A. J. Bahan, Woodside Bldg., Greenville, S. C.; D. E. Williams, Jr., 312 Hines Terrace, Macon, Ga.

WATSON & HART, 1001 E. Bessemer Ave., Greensboro, N. C.

WATSON-WILLIAMS MFG. CO., Millbury Mass. Sou. Reprs.: W. F. Daboll, 703 Jefferson Bldg., Greensboro, N. C.; Arthur J. Bahan, 810 Woodside Bldg., Greenville, S. C.

WEST POINT FOUNDRY & MACHINE CO., West Point, Ga.

WESTPORT FIBRE CORP., Westport, Mass., Hugh Neville, Jr., Pres. Va. and N. C. Repr.: Oliver D. Landis, Inc., 718 Queens Rd., Charlotte 7, N. C.; Ga., Ala. and Tenn. Repr.: J. W. Davis, 122 Dillingham St., Columbus, Ga.; S. C. Repr.: Ralph Gossett, 15 Augusta St., Greenville, S. C.

WHEELER REFLECTOR CO., INC., 275 Congress St., Boston 10, Mass. Sou. Reprs.: Ernest Hall, 901-A Sul Ross St., Houston, Tex.; Marshall Whitman, Bona Allen Bldg., Atlanta, Ga.

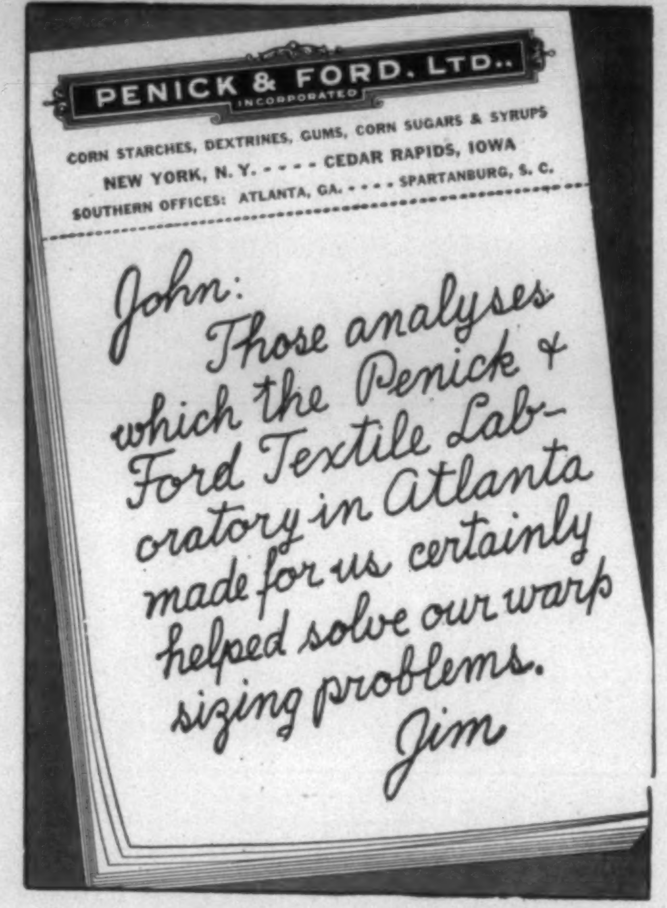
WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Office, Whitin Machine Works Office and Plant, Dowd Road, Charlotte, N. C., R. I. Dalton, Sou. Agt.; Charlotte Repair Shop, Z. C. Childers, Sales Mgr.; Atlanta, Ga., Office, 1015 Healey Bldg., B. B. Peacock, Sou. Agt.; Spartanburg, S. C., 724 Montgomery Bldg., R. W. Dunn, Sou. Agt.

WHITINSVILLE SPINNING RING CO., Whitinsville, Mass. Sou. Repr.: William K. Shirley, Box 84, Ware Shoals, S. C.

WILKIN & MATTHEWS, 831 N. Tryon St., Charlotte 3, N. C. Hugh Wilkin and John Matthews.

WILSON CO., EMIL V., Greenville, S. C.

WOLF, JACQUES & CO., Passiac, N. J. Sou. Reprs.: C. R. Bruning, 302 N. Ridgeway Dr., Greensboro, N. C.; G. W. Searell, Rt. No. 15, Knoxville, Tenn.



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INCORPORATED
CORN STARCHES, DEXTRINES, GUMS, CORN SUGARS & SYRUPS
NEW YORK, N. Y. - - - - CEDAR RAPIDS, IOWA
SOUTHERN OFFICES: ATLANTA, GA. - - - - SPARTANBURG, S. C.

John:
Those analyses which the Penick & Ford Textile Laboratory in Atlanta made for us certainly helped solve our warp sizing problems.
Jim

PINS and LAGS

A BIG MODERN PLANT PLUS 80 YEARS of EXPERIENCE

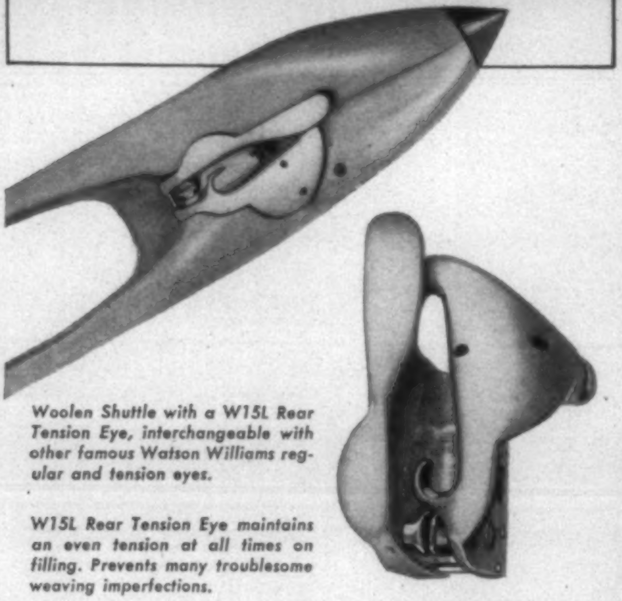
It means that you can speed your production by making use of all the knowledge we have gained on needle-pointed specialties for the preparation of wool and other fibers. In all the field—no plant like this—no such rich fund of experience—no such quality. Your inquiries will receive prompt attention.

■ ■ ■

WILLIAM CRABB & CO.
P. O .Box 95 **Black Mountain, N. C.**

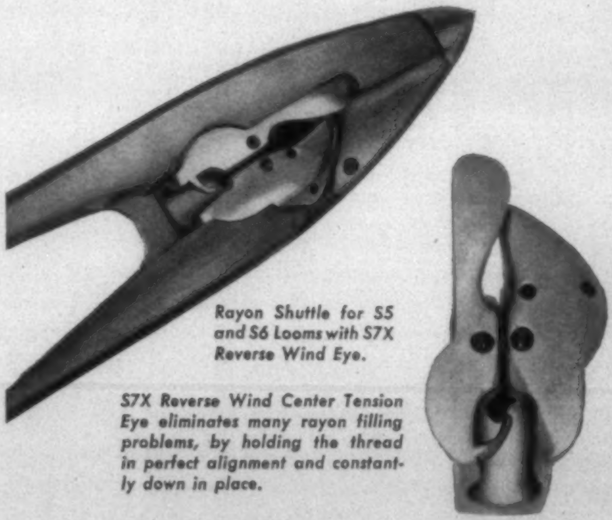
Keep ahead of your shuttle needs

Give ample protection to your weaving standards, which the Shuttle People help you to maintain, by purchasing your shuttles well ahead of time. Be on the safe side, and certain of those Watson Williams shuttle features on which you particularly depend. Allow at least an extra month for us to meet your exact requirements.



Woolen Shuttle with a W15L Rear Tension Eye, interchangeable with other famous Watson Williams regular and tension eyes.

W15L Rear Tension Eye maintains an even tension at all times on filling. Prevents many troublesome weaving imperfections.



Rayon Shuttle for S5 and S6 Looms with S7X Reverse Wind Eye.

S7X Reverse Wind Center Tension Eye eliminates many rayon filling problems, by holding the thread in perfect alignment and constantly down in place.

WATSON-WILLIAMS MFG. CO.
MILLBURY, MASSACHUSETTS

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Watson and Desmond, Box 1954, Charlotte, N. C.
Arthur J. Bahan, 810 Woodside Bldg., Greensville, S. C.
Greensboro, N. C. office, Jefferson Building

NORTHERN REPRESENTATIVE:
Guy C. Burbank, 32 Beaconsfield Rd., Worcester 2, Mass.

CLASSIFIED ADVERTISING

STOCK READY FOR IMMEDIATE DELIVERY

48—Deliveries Saco-Lowell Drawing, 6 del. per frame, metallic rolls.
17—Deliveries Whitin Model F Drawing, common rolls.
1—Hetherington Ribbon Lap Machine.
1—Hetherington Sliver Lap Machine.
1—Saco-Lowell Vertical Opener, 1922 Model with gallows drive.
3—No. 7 Kitson Buckley sections.
8—40" Kitson Finisher Pickers, 16" Kerschner beaters, 4 lap doubling aprons.

. . . Partial Listing—Let us know your needs . . .

WILSON LEWITH MACHINERY CORP.

Post Office Box 4100
Charlotte 1, N. C.
Phone 4-2403
Warehouse: Wilkinson Blvd.
Behind Barbecue Lodge

WANTED

Executives, Supervisors, Office Personnel, and Operatives to register for positions in the textile industries. Mill inquiries invited.

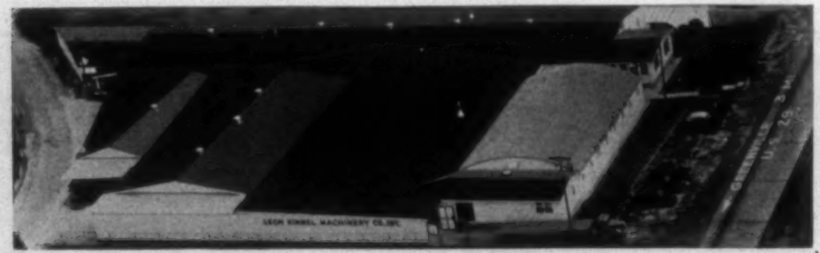
National Textile Employment Service
Box 1301, Atlanta, Ga.;
Box 1674, Charlotte, N. C.;
Box 7545, Philadelphia, Pa.;
Box 1490, Boston, Mass.

PLANT ENGINEER for Southern manufacturing concern operating cotton mill, bleachery, print works and dye plant. Prefer man 30 to 45 years of age with technical college training, one who has had actual experience in engineering phases noted above. Successful candidate must understand how to supervise maintenance personnel for maximum productive results. Plant located in growing metropolitan area. Starting salary commensurate with educational background and experience. Splendid future prospects for man capable of successfully handling this assignment. Replies held strictly confidential. Address full particulars, and enclose snapshot, if available, to

"Plant Engineer," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

- If you want a new job, if you are seeking someone to fill a position, the classified advertising department of Textile Bulletin is ready to help. The classified section is read by both employees and employers.

- Firms having textile mill equipment for sale also find Textile Bulletin classified advertisements valuable in establishing business contacts.



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Largest Warehouse Stock In The South

WE BUY, SELL OR TRADE USED TEXTILE MACHINERY AND SUPPLIES

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Phone 2-2721

LEON KIMMEL MACHINERY COMPANY

OFFICE AND WAREHOUSE: NEW SPARTANBURG HIGHWAY — GREENVILLE, S. C.

Specialists
IN
TEXTILE LOOM EQUIPMENT

★ Checkmaster Check Straps
★ Plastic-Bonded Canvas Lug Straps
★ Gates Textile Accessories
★ Impact Binder Leathers

—LOOM STRAPPING—
OF EVERY DESCRIPTION

GREENVILLE BELTING CO.
DIVISION OF
Schmidt Manufacturing Co.
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EATON & BELL
Patent Attorneys

904 Johnston Bldg., Charlotte, N. C.
753 Munsey Bldg., Washington, D. C.

WANTED

Position as head of large supply room or purchasing agent of textile mill or mills. Six years' experience with mill chain. Now employed.

Write "Supply Room," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as Assistant Manager or Superintendent of yarn or twine mill. Experienced on all phases cotton and waste manufacture, including Tube Twists and Polishing. Capable of reorganizing and purchasing. Good health and high moral standards. High school education. Employed at present. All replies treated strictly confidential. Write "S.N.K." care Textile Bulletin P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—Overseer Carding and Spinning. Experienced. Thoroughly reliable. Good references. Write "Card-Spin," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as superintendent of combed or carded yarn mill. Have 15 years' experience running yarn mill on combed-carded—also rayon. Address "CC," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Job as fixer on Barber-Colman Spooling and Warping. 18 years' experience. Sober; good references. Write "Fixer," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as head loom fixer or head overhauler on C&K looms. 32 years' experience. Write "VCW," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

A NO. 1 LOOM MAN on 4 and 1 automatic dobbies, C & K and Draper looms, with many years' experience fixing, head fixing, assistant foreman, wishes to locate within 200 miles of Charlotte on day run. Above the draft age; has family; references. Write "Loom," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as weave room overseer. Experienced and employed. No job too large or too small. Experienced on a variety of weaves; strictly sober; reference. Write "S. J. A.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—By I. C. S. graduate, position as second hand or overseer in Spinning Department; experienced, sober, and hard worker; 43 years of age, high school education; good references as to character and ability. Now employed as spare fixer, but want advancement. For interview write or wire "Spinner," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

CLASSIFIED ADVERTISING

CLASSIFIED ADVERTISING

Rates: $3 per inch for bordered insertions; four cents per word for insertions without borders. Minimum charge: $1 per insertion.

TEXTILE BULLETIN
P. O. Box 1225
Charlotte 1, N. C.

● If you want a new job, if you are seeking someone to fill a position, the classified advertising department of Textile Bulletin is ready to help. The classified section is read by both employees and employers.

WANTED

A card room overseer. Must furnish qualifications and references.

Write "CR," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

FOR SALE

- 369—40" Draper E Model Looms, brown spring top. Belt. 276 are double fork. EXCELLENT CONDITION.
- 1—82" B. S. C&K W-2 Loom, auto 4 x 1 box, 20 harness, motor.
- 1—92" B. S. C&K C-4 Loom, auto 4 x 1 box, 16 harness dobby, overhead multipliers, motor.
- 6—102" B. S. C&K Blanket Looms, auto 4 x 1 under 1300 hook jacquard.
- 4—30 Spindle Lazenby Model T Jr., cop and butt winders, 550 volt motors, for inside wound cops.

WATSON & DESMOND
Used Machinery Department
Charlotte, N. C.
P. O. Box 1954 Phone 3-6154

SALESMAN WANTED

Man with complete knowledge of Southern territory and with some years' experience to cover the textile field in detergents, water repellents, softeners, resins, and a complete line of textile specialties including some dyestuffs. This company is looking for a man who will eventually become sales manager in charge of Southern Sales if he proves himself to be capable.

Address "Future," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

BUILDING FOR SALE

80,000 square feet of manufacturing space—
25,000 square feet of warehouse space—
Equipped with Heating and Sprinkler system —
Previously accommodated 20,000 spindles and 500 looms—
All facilities for manufacturing available—
Located in a Southern City.
Immediate possession—must be seen to be appreciated.
VERY REASONABLY PRICED.
Plans and Specifications available.

A Good Business deserves a good home and good location.
Write or call for any further information.

W. D. LEWIS

Textile Machinery and Equipment

P. O. Box 826
Gastonia, N. C.

Phone: Day 5-2265
Night 5-4998

840 N. Marietta
Gastonia, N. C.

POSITION WANTED

Office manager, accountant, experienced. Now employed; can come for interview; good references.

Write "O. A. M.," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

WANTED

Spinning room foreman cotton textile mill located in North Carolina. Applicant must be a hustler.

Address reply to "X," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED

Overseer of weaving. Actual experience on cotton and some rayon. Can produce high efficiency of quality production; good loom man and manager of help. Available for interview.

Write "AR," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

EXPERIENCED DYER AVAILABLE

24 years' experience on cotton and synthetic fibres; raw stock, beam, package and dye becks. North Carolina State Textile School graduate. Now employed. Excellent references.

Address "Dyer," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

GUARANTEED USED MACHINE SHOP EQUIPMENT IN STOCK

Milwaukee Milling Machine, Double Overarm, All Geared.
Milwaukee Milling Machine, Single Overarm, All Geared.
No. 6 Warner & Swasey Turret Lathe.
No. 5 Foster Turret Lathe.
No. 2 Warner & Swasey Turret Lathe.
18" x 8' Milwaukee Lathe, Motor Drive, Taper Attachment.
10" Queen City Pedestal Grinder, Brand New.
Sheldon 10" Lathe, Cabinet Base with lots of tooling.
New Atlas Drill Presses.

Peerless Power Hacksaw 6" x 6" Motorized.
Van Norman Re-Li-O Grinder.
Norton Tool and Cutter Grinder with Magnetic Chuck.
Henry & Wright Ball Bearing, 2-Spindle Drill Press, Motorized.

NEW METAL CUTTING TOOLS IN STOCK:
Barber-Colman—Hobs, Milling Cutters, etc.
Chicago-Latrobe—Twist Drills and Reamers.
Threadwell—Taps and Dies.
Heller Brothers—Files.
Putnam—End Mills.
Starrett—Saws.

The above is partial list only. Please advise us of your requirements.

APEX MACHINE TOOL SUPPLY CO.

3107 Wilkinson Blvd. Phone 3-1921 Charlotte, N. C.

POSITIONS OPEN—MEN WANTED: Supt. large rayon weaving and throwing mill. OVERSEERS FOR FOLLOWING DEPTS.: rayon piece goods dyeing and finishing; cotton carding and spinning combined; garnetting and picking 3rd shift; overseer rayon weaving or throwing or supt. to sell chemicals; second hands for cotton and rayon weaving; second hands cotton carding; time study and industrial engineers; mechanical and plant engineers; draftsmen and designers; electrical engineers; master mechanics; chemists and chemical engineers; knitting instructor. LIST YOUR CONFIDENTIAL APPLICATION WITH US to keep informed of attractive positions open in the textile mills.

SPECIALISTS IN PLACING AND FURNISHING TEXTILE MILL EXECUTIVES

CHARLES P. RAYMOND SERVICE, INC.

294 Washington Street
Phone: LIberty 2-6547
Boston 8, Mass.

Before Closing Down

– TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED –

PERSONALS

Taylor Oakes has been named personnel manager for Dover Cotton Mills at Shelby, N. C. A native of Weldon, N. C., and a graduate of Duke University, Mr. Oakes was in the insurance business in Roanoke Rapids, N. C., prior to joining Dover Cotton Mills.

John M. Caughman, general superintendent of the Spartan Plant of Spartan Mills, Spartanburg, S. C., has been re-elected to the board of trustees of Newberry (S. C.) College. . . . Mr. Caughman, who is a past president and past executive secretary of the Southern Textile Association, recently completed his tenth year with Spartan Mills.

John M. Hughlett has been appointed a vice-president of J. P. Stevens & Co., Inc. He is in charge of merchandising men's wear worsted and rayon suitings at the company's New York office at 350 Fifth Avenue. Before joining the firm in September, 1949, Mr. Hughlett was general sales manager and a vice-president of Dan River Mills, Danville, Va.

J. B. Cumming has resigned as superintendent of Schoolfield Division No. 2 of Dan River Mills, Danville, Va., to become associated with Dominion Textiles, Ltd., Montreal, Canada. Mr. Cumming had been associated with Dan River for five years and prior to that was with Ford Bacon & Davis, Inc.

E. N. Brower, president of Rockfish-Mebane Yarn Mills, Hope Mills, N. C., will be recommended as the representative of the carded yarn industry on any over-all textile advisory committee that may be set up by the government, it was decided recently at a special meeting of the board of directors of the Carded Yarn Association in Atlanta, Ga.

Arthur F. Chase has succeeded W. B. Pickard, retired, as manager of the Cordova, Ala., plant of Textron Southern, Inc. Mr. Chase has been with the firm since 1946 and just recently returned to the United States from Puerto Rico where he was manager for a year of a new Textron plant on the island.

Victor Saxl, sales manager and engineer for Stellite American Corp., has been appointed a vice-president of the corporation. Before joining Stellite, Mr. Saxl was manager of woolen mills in Czechoslovakia and Hong Kong.

Dewey A. Kent, cloth room overseer at Thomaston (Ga.) Mills, recently completed 40 years of continuous service with the company. Mr. Kent was presented an engraved gold watch by George Hightower, vice-president.

H. B. Darden, Jr., has been appointed chief accountant at the Winnsboro, S. C., plant of United States Rubber Co. Mr. Darden, who has been with the firm since 1938, succeeded F. Harrison Sheely, who recently was appointed office manager at Winnsboro. . . . Grisby Gerald, associated with the firm at Winnsboro since 1936, has been named to succeed Mr. Darden as cost accountant.

H. D. Ruhm, Jr., president of Bates Mfg. Co., recently was elected a director of the New York Board of Trade.

A. P. McGraw of Charlotte, N. C., Carolinas representative of Trumbull Electric Mfg. Co., an affiliate of General Electric Co., recently was one of 65 G-E employees to receive the Charles A. Coffin Award for work of outstanding merit in 1950. Mr. McGraw was honored for his originality and ingenuity in the marketing of a new design loom switch for use in the textile industry.

Eldon Stowell recently resigned as manager of development of textile fibers at Carbide & Carbon Chemicals Division of Union Carbide & Carbon Corp. to become associated with Gilbertville (Mass.) Mills, a subsidiary of Ware (Mass.) Knitters. Mr. Stowell will open a New York office for Gilbertville Mills about March 15.

Dr. Richard S. Cox, dean of the Philadelphia Textile Institute, Germantown, Pa., has been elected a fellow of The Textile Institute at Manchester, England. Dr. Cox started his teaching career at the Philadelphia Textile Institute in 1899 and was appointed dean of the college in June, 1943.

William W. Rader, who was elected a director of Mooresville (N. C.) Mills on Jan. 8, has recently assumed full-time duties with the company in connection with the financial and costs and accounting phases of the business. . . . W. B. Powell, formerly assistant plant engineer for Mooresville Mills, has been named engineer to succeed the late E. E. Edmiston.

Joe D. Moore, president and treasurer of Moore Textile Co., producer of drapery and upholstery fabrics, has been elected to the Charlotte (N. C.) Rotary Club.

J. Harold Lineberger has been named to succeed the late A. C. Lineberger, Jr., as president of Piedmont Processing Co., Belmont, N. C.

G. G. Huffstetler has resigned as superintendent of Johnston Mfg. Co. at Charlotte, N. C., to accept a similar position with Piedmont Processing Co., Belmont, N. C. Mr. Huffstetler succeeds S. H. Caldwell, resigned.

William J. Moore, manufacturer's agent of Greenville, S. C., was severely injured Jan. 29 in an automobile accident in Louisiana. Mr. Moore was en route home from a business trip to Dallas, Tex. He has been brought to a hospital in Greenville and is reported to be improving nicely.

James E. MacDougall, Jr., representative for the yarn firm of Barnhardt Bros. of Charlotte, N. C., was married Feb. 10 to Miss Margaret Denney of Washington, D. C.

Promotions to second hand in various plants of Callaway Mills Co., LaGrange, Ga., have been announced for the following men: George Cardwell, Elm City sewing room; Marvin M. Pollard, dye plant raw stock; Hoyt Burdett, Valway carpet unit; Emmett Bailey, Valway shipping department; and William G. Lynch, Jr., Valway finishing room.

James J. West, a member of the laboratory staff at Union Bleachery, Greenville, S. C., and Mary Elizabeth Miller of the fiber laboratory of Dunean Mills, Greenville, were married Jan. 13. Both are 1948 graduates of the School of Textiles at North Carolina State College.

Gordon Rule, Washington counsel to the textile industry committee on foreign trade, has been recalled to active duty as a captain in the Navy.

Thomas M. Gow, former coatings salesman for the New York area of Dow Chemical Co., has been named assistant to Floyd J. Gunn, head of the coatings section of the company's plastic sales division in Midland, Mich. Gow, a chemical engineering graduate of the University of Tulsa, has been with Dow since 1946. He was formerly associated with Gates Rubber Co., Denver, Colo., and served in the Navy during World War II. . . . Ross D. Visger has been named to succeed Mr. Gow in the New York office. Mr. Visger joined Dow in 1946 and has been in coatings technical service laboratories in Midland for the last three years. He holds a chemical degree from Central Michigan College, Mt. Pleasant, Mich., and was in the Navy from 1942 to 1945.

David R. Johnston, president of Highland Park Mfg. Co. and Johnston Mfg. Co. at Charlotte, N. C., and other Johnston-affiliated plants, has been elected to the board of directors of the Charlotte Community Chest.

Walter E. Greer, Jr., a vice-president of Burlington Mills Corp., has been transferred from the New York office of the firm to its manufacturing offices in Greensboro, N. C., and has assumed charge of several of the company's manufacturing divisions including supervision of the purchase of all raw materials.

C. F. Cline, Jr., has been placed in charge of a new branch office at 611 West Fifth Street, Charlotte, N. C., of the mechanical goods division of United States Rubber Co., which this month announced the development and beginning of large-scale production of a new line of both plastic and rubber textile mill supplies. The new line consists of nearly 30 types of specialties for yarn carrying operations and textile machinery. Included are such items as quills, spindle bumper tubing, lap winder rolls, sand roll covering, warp compressor roll covering, spinner belts, cop butts, spinning and card room cots, tapered warp spinning tubes, spooler sleeves, and other molded and extruded specialties. "For the past five years we have conducted an extensive research program for the development of new products for the textile industry," states Mr. Cline. "The emphasis has been on the application of a new plastic material particularly suited for the textile specialty field. Known as Uscolite, it combines the hardness of plastics with the toughness of rubber. It is extremely tough, almost impossible to shatter. Quills made of the plastic, for example, will wear twice as long as wood and will neither shatter, chip nor warp. This lowers maintenance costs." Production facilities for the plastics have been doubled at the division's Passaic, N. J., plant in order to provide the productive capacity for the new specialties.

William T. Stearn has been named superintendent of the textile section of Celanese Colombiana, S. A., which is now erecting an acetate filament yarn plant near Cali. Mr. Stearn has been affiliated with the Cumberland, Maryland, plant of Celanese Corp. of America since 1930.

OBITUARIES

John L. Dabbs, Jr., 43, for the past 22 years associated with E. I. du Pont de Nemours & Co., Inc., died Feb. 16. A native of Charlotte, N. C., Mr. Dabbs had made his home in Statesville, N. C., for the past three years. Surviving are his wife, one son, a sister, his stepmother and a stepbrother.

George W. Felker, chairman of the board of Walton Cotton Mill Co., Monroe, Ga., died recently. Interment was made Feb. 13 at Rose Haven cemetery in Monroe.

Ernest D. Gossweiler, 62, of Pelham, N. Y., president and director of Sandoz Chemical Works, Inc., died suddenly Feb. 1 in his office at 61 Van Dam Street, New York City. After working for Sandoz, Ltd., in England and Switzerland, Mr. Gossweiler founded the American firm in 1919, the year he came to the United States from Basle, Switzerland. Mr. Gossweiler was a director of Cincinnati Chemical Works, Inc., and president and director of Sandoz Chemical Works, Ltd., of Toronto and Sandoz Pharmaceuticals in Montreal. Surviving are his wife, a son, a daughter and a brother.

George W. O'Keefe, vice-president in charge of sales for Proctor & Schwartz, Inc., died Feb. 11 at his home in Elkins Park, Pa., after a long illness. He was 56 and had joined the company shortly after World War I. Except for a short period with another company, he stayed with Proctor & Schwartz. He was named sales manager of the dryer division in 1943 and shortly afterwards was elected a vice-president.

Courtland Palmer, 61, attorney and textile executive of New York City, died Feb. 10. Mr. Palmer had been an official of Russellville (Ala.) Mills, Douglas Mill at Douglasville, Ga., Du Court Mills at Kings Mountain, N. C., and also Crest Tex Mills, Inc., which in 1944 took over two units of Alabama Mills, Inc., at Haleyville and Russellville, Ala. Surviving are his wife, a son and a daughter.

MILL NEWS

SALISBURY, N. C.—The five cotton mills headed by W. F. McCanless, president and treasurer, have been consolidated under one name, McCanless Mills, Inc. They include Klumac Cotton Mills, Lariat Mills, Inc., Rancho Mills and Victory Mills, Inc., at Salisbury, and Palomino Mills, Inc., at Davidson, N. C. The five plants contain a total of approximately 26,000 spindles and 450 looms.

SPARTANBURG, S. C.—Carolina Textile Co., with authorized capitalization of $100,000, was chartered Feb. 10 to do a general mercantile business in goods, wares and merchandise; to finish, process, fabricate and manufacture wearing apparel. Benjamin O. Johnson is listed as president of the new concern.

FIELDALE, VA.—Bids were to have been received Feb. 28 for construction of an addition to the finishing building of the towel mill of Fieldcrest Mills here. Architect for the proposed structure is Robert & Associates of Atlanta, Ga.

CORDOVA, ALA.—A sewer main worth about $75,000 has been presented to the City of Cordova by the Cordova Plant of Textron Southern, Inc. Legal papers conveying the sewer to the city were turned over to Cordova's Mayor Joe Poe by W. B. Pickard, plant manager, shortly before his retirement after 43 years service with the company.

LAFAYETTE, ALA.—Fire of undetermined origin recently damaged 210 bales of cotton in the warehouse of Avondale Mills here. The automatic sprinkler system prevented spread of the fire and held down damage to the building and stored cotton.

GREENSBORO, N. C.—Two well-known manufacturing units of Burlington Mills—the Puritan weaving plant at Fayetteville, N. C., and the Gloria rayon plant at Johnson City, Tenn. — have had their names changed in honor of the communities in which they operate. Puritan Weaving has been officially designated as the company's Fayetteville Plant, and Gloria rayon has been changed to the Johnson City Plant. First announcements of the name changes were made at meetings of civic, business and governmental leaders held at each plant community. Burlington Mills was host. The names were changed to more closely identify

S. T. A. Division To Study Physical Testing

J. R. Meikle, general superintendent of Rosemary Mfg. Co. of Roanoke Rapids, N. C., has announced that the Eastern Carolina Division of the Southern Textile Association, of which he is chairman, will have its Spring meeting March 3.

The meeting, which will begin at 9:45 a.m. that Saturday, will be held in the auditorium of the North Carolina State College School of Textiles, Raleigh. The subject for discussion will be "Physical Testing's Part in Better Manufacturing." The topic was chosen by the Eastern Carolina Division's program committee as being particularly appropriate at this time due to the many military orders for textiles now in the hands of the industry. Dame Hamby, assistant professor at the textile school, will display and explain the school's testing apparatus and equipment from the auditorium stage.

The Eastern Carolina Division meeting comes on the final day of the Southern Conference basketball tournament in Raleigh.

The Piedmont Division, S.T.A., will meet Monday evening, May 7, according to plans now being made by Marshall H. Rhyne of Belmont, N. C., chairman. The speaker will be Thomas L. Carroll of the National Cotton Council. Spring meeting dates and places as yet have not been announced by chairmen of the South Carolina and Northern North Carolina-Virginia groups.

The annual convention of the Southern Textile Association is scheduled June 21-22-23 at Mayview Manor, Blowing Rock, N. C., where one of the principal speakers will be Guy B. Arthur, Jr., president of Management Evaluation Services, Inc., Toccoa, Ga. Room reservations for the convention are now being made direct with the hotel management.

the two plants with the cities in which they were located and the industrial sections of North Carolina and Tennessee, Burlington officials said. Burlington acquired the Johnson City property in 1935. The Fayetteville plant was purchased in 1929. Both properties had run onto financial shoals and the plants had been closed down for some time when they were taken over by Burlington Mills. Both have operated without a day of interruption under present management. Both plants have been enlarged several times and continuous machinery improvements made.

WHITMIRE, S. C. — Employees of the Whitmire Plant of Aragon Baldwin Mills were receiving congratulations this month for having operated more than a million man hours without a lost-time accident. Letters expressing such appreciation were sent to the Whitmire Plant, a division of J. P. Stevens & Co., Inc., by R. G. Emery, executive vice-president and J. Wilbert Wood, vice-president and assistant executive officer. The Whitmire Plant is one of the divisions in the Dunean Mills group of the Stevens company.

HUNTINGTON, W. VA.—Representatives of Celanese Corp. of America visited several sites in West Virginia this month, seeking a suitable tract for construction of a rayon plant. Under consideration are a site at Huntington containing 156 acres, eight tracts near Point Pleasant totaling about 450 acres, and a tract near Moundsville.

MOUNT HOLLY, N. C.—Fibre Products, Inc., has received a state charter to "deal in textile fabrics," with authorized capital stock of $300,000. Stock was subscribed by Alex W. Bell, Robert F. Jessen and Lewis E. Chittum, all officials of American Yarn & Processing Co.

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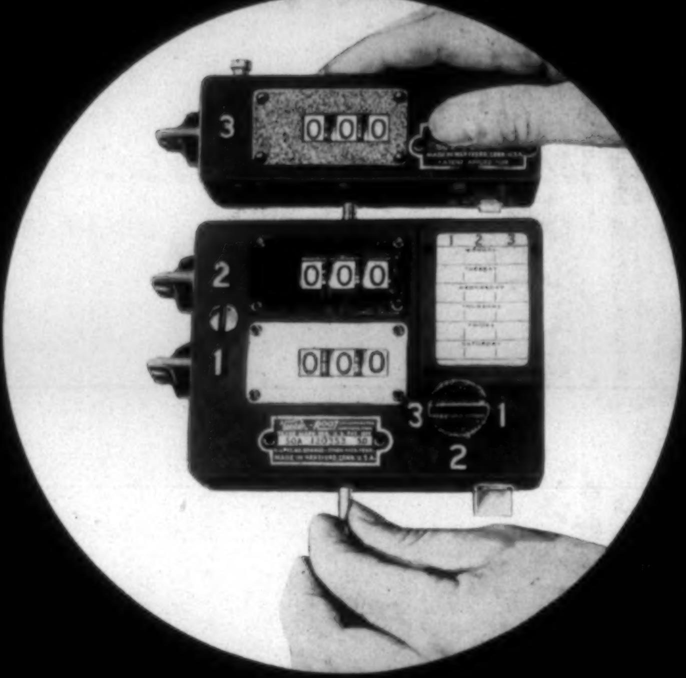

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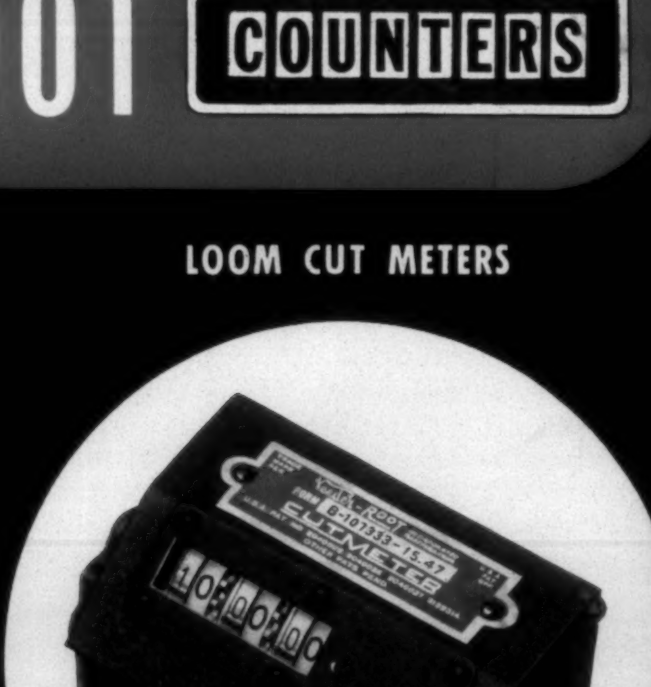

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